

COMMERCE ACT 1986: BUSINESS ACQUISITION

SECTION 66: NOTICE SEEKING CLEARANCE

Date: 19 December 2018

The Registrar
Mergers and Acquisitions
Commerce Commission
PO Box 2351
Wellington

Pursuant to section 66(1) of the Commerce Act 1986 notice is hereby given seeking clearance of a proposed business acquisition.

Part 1: Overview

- 1.1 This is an application for clearance pursuant to section 66(1) of the Commerce Act 1986 made by Ixom Operations Pty Limited (**Ixom**) to acquire the Tasman Chemical Plant that includes the chlor alkali plant and integrated dioxide plant assets located at Fletcher Avenue in Kawerau (**Tasman Plant**) (including chlorine and derivative product manufacturing assets, plant spares, tanks and associated equipment) of Oji Fibre Solutions (NZ) Limited (**Oji** or the **Vendor**) and a leasehold interest over the land occupied by the Tasman plant (altogether the **Proposed Acquisition**). Ixom and Oji together are termed the **Parties**.
- 1.2 The relevant products at issue in this application (**subject products**) are:
 - 1.2.1 Sodium Hypochlorite (**Hypo**) is a chemical compound with the formula NaOCl or NaClO which is mostly used for water treatment and by Oji in its pulping processes.
 - 1.2.2 Hydrochloric acid (**HCl**) is a colourless inorganic chemical system with the formula H₂O: HCl which is predominantly used in New Zealand to manufacture poly aluminium chloride (**PAC**), in metal treatment purposes and water treatment purposes.
 - 1.2.3 Caustic soda (**Caustic**), also known as sodium hydroxide, is an inorganic compound with the formula NaOH which is predominantly used for process cleaning in a number of industries (particularly in the food manufacturing industry) and by Oji in its pulp processes.
- 1.3 The Proposed Acquisition will not, and will not be likely to, cause a substantial lessening of competition in any market as:
 - 1.3.1 The relevant counterfactual against which to test the competition implications of the Proposed Acquisition is a counterfactual in which:

- (a) The Tasman plant will cease operation at the end of March 2019 pursuant to Oji's already announced plans for closure of the plant;
 - (b) Ixom will build a North Island Hypo plant in order to maintain continuity of supply of that Hypo to customers in New Zealand, as already contemplated in its internal business planning documents.
- 1.3.2 Under both the factual and the counterfactual, there will be significant constraints on Ixom from imports at reasonable cost in the case of HCl and Caustic, as well as from supply of Hypo and HCL from Oji's Kinleith plant.
- 1.3.3 In relation to the market for the supply of Hypo, there will be significant constraints on Ixom under the factual from;
- (a) The availability of Hypo from Oji's Kinleith plant;
 - (b) The ability for a new operator to build a Hypo manufacturing plant [];
 - (c) Imports in relation to the use of Hypo for agricultural cleaning and disinfection;
 - (d) The ability of customers to instead use chlorine, on-site Hypo generation and/ or the use of UV technology as substitutes for the use of supplied Hypo for water treatment.
- 1.3.4 These constraints will be at least as strong as those that would apply under the counterfactual, especially as under the counterfactual there will be less Hypo and HCl available from Oji's Kinleith plant, due to Oji's need to source Hypo and HCl from the Kinleith plant in its Tasman mill (whereas currently Oji's Hypo and HCl demand at its Tasman mill is sourced from the Tasman Plant which would cease in the counterfactual). Kinleith will therefore impose less of a competitive constraint for Hypo and HCl under the counterfactual.
- 1.3.5 In addition, Ixom relies on the attached analysis by NERA of vertical merger issues.
- 1.3.6 The expected level of competition, and of competitive constraints, in each relevant market will not be materially different under the counterfactual than it is under the Proposed Acquisition.
- 1.3.7 Accordingly the Proposed Acquisition does not involve any lessening of competition let alone any substantial lessening of competition.
- 1.4 Ixom therefore submits that clearance should be granted.

Part 2: Applicant Details

2 Ixom

2.1 **Applicant:** This notice is given by Ixom Operations Pty Limited (Company Number: 5488365). The Companies Register extract for Ixom is set out at Appendix 1.

2.2 **Contact:** The contact details for Ixom are as follows:

Principal place of business in New Zealand:

166 Totara Street,
Mount Maunganui South 3116
New Zealand

Website: <http://www.ixom.com/about-us>

Contact Person: Nik Andersen, Head of Legal and Company Secretary
Telephone: +64 9 368 2700
Mobile: +61 410 170 725
Email: nik.andersen@ixom.com

2.3 **Correspondence:** Ixom requests that all correspondence is directed in the first instance to:

Nick Crang
Partner, Duncan Cotterill
Level 2, Tower Building
50 Customhouse Quay
Wellington 6011
Telephone: 04 471 9440
Fax: 04 499 3280
Email: nick.crang@duncancotterill.com

3 **Other party to the acquisition:**

3.1 **Vendor:** The other party to the acquisition is Oji Fibre Solutions (NZ) Limited (Company Number: 1308173).

3.2 **Contact:** The contact details for Oji are as follows:

Registered office/physical address and address for service:

289 Great South Road
Ellerslie
Auckland, 1051
New Zealand

Website: <https://www.ojifs.com/>

Contact person: Darren Gilchrist
Telephone: (07) 885 5900
Mobile: (027) 702 4965
Email: darren.gilchrist@ojifs.com (Energy Manager)

4 **Structure of the Parties**

4.1 Ixom is a registered overseas ASIC company operating in New Zealand. It is owned by funds managed by The Blackstone Group L.P. The owners of Ixom have recently entered into a conditional agreement to sell the Ixom Group to Keppel Infrastructure Fund Management Pte Ltd as trustee for Keppel Infrastructure Trust. Keppel Infrastructure Fund Management Pte Ltd is incorporated in Singapore and its parent is listed on the Singapore Stock Exchange. Neither Blackstone Group LP nor Keppel Infrastructure Fund Management Pte Ltd or its related parties own any chemical operations in New Zealand.

4.2 The Vendor is a NZ registered company. It is 100% owned by Oji Oceania Management (NZ) Limited, whose ultimate holding company is Oji Holdings Corporation, a Japanese company.

4.3 There is no common ownership between Ixom and the Vendor.

5 **Overview of the Parties**

5.1 Ixom operates a chemical manufacturing, supply and distribution business in Australia and New Zealand, and also operates (through subsidiaries) in North and South America and Asia, as well as a small water treatment equipment business. Ixom's head office is in Melbourne

Australia, but it has management and operational staff in New Zealand, as well as some manufacturing capacity and logistics infrastructure in New Zealand.

5.2 In terms of the subject products:

5.2.1 Ixom and other distributors buy Hypo and HCl from Oji at the Tasman Plant and the Kinleith Plant and sell that Hypo to smaller-scale distributors/retailers and to end-users.

5.2.2 Ixom also operates a Hypo plant in Christchurch.

5.2.3 Ixom imports bulk Caustic through facilities at Tauranga and Timaru and third party leased tanks in Tauranga, Napier, New Plymouth, Wellington and Bluff.

5.2.4 Ixom operates its own fleet of trucks and road tankers to deliver product to customers, but also utilises third party logistics' providers.

5.3 The Vendor is part of the Oji Group, a major international participant in the forest, paper and packaging industry. The Vendor operates two major pulp and paper plants at Kinleith (Kinleith Mill) and Kawerau (Tasman Mill), and a mill for recycled product at Penrose, Auckland. The Vendor acquired the Tasman Mill and the Kinleith Mill following the Commerce Commission's clearance of its acquisition of Carter Holt Harvey Pulp and Paper Limited in 2014.

5.4 Oji owns and operates two chemical plants associated with the Kinleith Mill and the Tasman Mill (one at each mill site). The purpose of the chemical plants is to produce input products for the mills but they also provide Hypo and HCl (and in the case of the Kinleith plant, chlorine) to the rest of the New Zealand marketplace. The Vendor has decided to cease operating the Tasman chemical plant (i.e. the Tasman Plant) from 31 March 2019 and has decided to sell the Tasman Plant to Ixom or otherwise close that Plant permanently. As discussed in paragraphs 18.3 and 18.4, there is no other party in a position to meet the necessary requirements to safely manage and operate the plant on the Vendor's land at the Tasman Mill site.

Part 3: Transaction Details

6 Proposed Acquisition

6.1 The Proposed Acquisition would involve the acquisition by Ixom of the chemical plant assets located at the Tasman Plant including chlorine and derivative product manufacturing assets, plant spares, tanks and associated equipment owned by the Vendor, and a lease over the land occupied by the Tasman Plant.

7 Commercial rationale for the proposed merger

7.1 The commercial rationale for the Proposed Acquisition is as follows:

7.1.1 Oji's Board of Directors has decided that Oji will cease producing bleached pulp at its Tasman Mill from 31 March 2019. This means that Oji will no longer require an on-site source of chlorine dioxide which it manufactures at its on-site chemical plant (the Tasman Plant) and a lesser amount of other products. The remaining products that Oji's Tasman pulp mill requires from the Tasman Plant (namely, caustic soda 20%, hydrochloric acid and sodium hypochlorite) can be procured either from imported products or imported caustic soda and locally manufactured hydrochloric acid (from Oji's Kinleith site) and sodium hypochlorite (from Oji's Kinleith site or Ixom's Timaru plant).

- 7.1.2 Oji is facing increased compliance costs and operational complexity following the introduction of new Major Hazard Facility Regulations¹ (**MHF Regulations**) in 2016. This means, taking into account its reduced needs for input products from the Tasman Plant, that it is no longer commercially and strategically sensible for Oji to keep the Tasman Plant in operation after 31 March 2019. Consequently, Oji's Board has made a decision to either sell or shut the Tasman Plant with effect from 31 March 2019. Appendix 2 sets out an extract from an Oji Board minute of 18 April 2018 recording the decision to convert the mill to production of only unbleached pulp, the consequence of which was that Oji then intended to close the Tasman Plant.
- 7.1.3 Ixom is interested in purchasing the Tasman Plant to ensure the security of supply to its customers of Hypo and HCl produced at the plant. While Ixom could meet supply of HCl from increased imports, and for Hypo by building a new Hypo plant in the NI, Ixom considers that its customers will receive more benefit and security of supply from the assurance of having a New Zealand source of supply for these products. Ixom's acquisition of the Tasman Plant will also ensure smooth supply of product over the short term, without interruption, which could otherwise occur if new sources overseas needed to be found or a new Hypo plant constructed.

8 **Control of target company/assets**

- 8.1 The Vendor currently controls the assets comprising the Tasman Plant and owns the land underlying the plant. The Tasman Plant is comprised primarily of equipment and tanks to manufacture and store HCl, Hypo and Caustic and a tank for the storage and dilution of sulphuric acid (which is used in the chlor alkali process). The Tasman Plant has been used by Oji to produce chlorine dioxide to bleach pulp produced in Oji's Tasman pulp mill, as well as caustic soda, sodium hypochlorite and hydrochloric acid consumed in that mill.

9 **Relevant ancillary agreements**

- 9.1 The Parties have signed a non-binding Terms Sheet. The Parties also intend to enter into other agreements to support the Proposed Acquisition that include:
- 9.1.1 Asset Sale Agreement for the purchase of the Tasman Plant;
- 9.1.2 Lease and access agreements for the Tasman Plant land;
- 9.1.3 Service and supply agreements under which Ixom is provided with site services in respect of the Tasman Plant, such as power, water, demineralised water, steam, site security, site entry, emergency services, effluent disposal and weigh bridge, and under which Ixom would provide Oji with diluted sulphuric acid and nitrogen from the Tasman Plant for use in Oji's pulp mill at Tasman;
- 9.1.4 Product supply agreements for Ixom's supply of caustic soda, Hypo and HCl to Oji following completion of the Proposed Acquisition.

10 **Copies of most recent versions of documents bringing about the proposed merger**

- 10.1 A copy of the Term Sheet is included at Appendix 3. [].

¹ Health and Safety at Work (Major Hazard Facilities) Regulations 2016.

Part 4: The Industry

11 Description of the industry

Manufacture of subject products

- 11.1 The Vendor currently manufactures Hypo, HCl, Caustic, chlorine dioxide and sodium chlorate at the Tasman plant².
- 11.2 Ixom understands from Oji that the Tasman Plant has a nameplate chlorine capacity of []. Once chlorine is produced at the Tasman Plant it must be immediately converted to a derivative product such as HCl, Hypo or chlorine dioxide. There is no storage or bottling facility for chlorine at the Tasman Plant.
- 11.3 Following the Proposed Acquisition there will no longer be any demand for the chlorine dioxide currently produced at the Tasman Plant. While Ixom will be acquiring the chlorine dioxide plant at Tasman (because it is within the boundary of the Tasman site), the plant will not be economic to run without the volume required for pulp bleaching. In addition, there is limited market demand in New Zealand for the chemical (approx. 500Tpa) and it is a dangerous chemical that is only safe to transport at very dilute concentrations. Accordingly, Ixom intends to decommission the plant and cease the manufacture of chlorine dioxide at Tasman.
- 11.4 Instead, Ixom intends to convert chlorine produced at the plant to Hypo and HCl. Caustic soda (20% strength) is a by-product of the HCl production process at the Tasman Plant and will be used by Ixom in the production of Hypo and the remaining volume of caustic soda will be supplied by Ixom to Oji for Oji's use in its Tasman and Kinleith mills. Other than Oji, there are very few customers in the New Zealand market who use caustic soda that is diluted to this level.
- 11.5 Oji also operates a chemicals and chlor-alkali plant at Kinleith (the **Kinleith Plant**), which produces Hypo, HCl, Caustic, chlorine dioxide and liquid chlorine. Ixom understands that Oji will need to continue to run the Kinleith Mill as a bleaching plant for the foreseeable future, which will require the continued operation of the Kinleith Plant.
- 11.6 In summary, the production of Hypo, HCl, and Caustic works as follows:
- 11.6.1 The chlor alkali plant produces chlorine and Caustic by combining water, electricity and salt. The chlor alkali plant consists of three main process areas, brine treatment, brine electrolysis and product handling. A description of the chlor alkali plant processes is set out in Appendix 4.
- 11.6.2 The amount of chlorine produced as a by-product of the production of 1T of Caustic is 0.45T.
- 11.6.3 This chlorine must then be used in the form produced (but requires careful handling and storage) or must be converted into other products (a "chlorine sink"). At present, there is no bottling facility at Tasman for chlorine and the chlorine produced at the plant cannot be stored. Instead, Oji converts the chlorine produced at the Tasman Plant into Hypo, HCl, chlorine dioxide and sodium chlorate.
- 11.6.4 Post-acquisition, there will only be demand for Hypo and HCl. The chlorine is demisted, cooled, filtered, and dried to produce HCl or it is compressed, liquefied and stored before it is re-vaporised for Hypo production.
- 11.6.5 Hypo is made by combining chlorine with Caustic. The conversion factor of chlorine to Hypo is 8.33 (i.e. 1T of chlorine makes 8.33T of Hypo). However, the conversion of

² From 31 March 2019, Oji will no longer use chlorine dioxide and sodium chlorate in its processes at the Tasman pulping plant and there is no other NZ customer for those chemicals. Production of those chemicals will therefore cease regardless of whether the plant is sold or shut-down. These chemicals are therefore not further considered in this application.

1T of Chlorine to Hypo requires the consumption of 1T of Caustic so, to put it another way, the conversion factor of Caustic to Hypo is also approximately 8.33.

- 11.6.6 HCl is made by burning and combining chlorine with hydrogen. The conversion factor of Chlorine to HCl is 3.3 (i.e. 1T of chlorine makes 3.3 tonnes of HCl).
- 11.7 Thus, the production of 1T of Caustic creates 0.45T of chlorine. If converted to HCl, that chlorine produces 1.49T of HCl. If converted to Hypo, that chlorine produces 3.75T approximately of Hypo, but 0.49T of the Caustic originally produced is also consumed to make that Hypo.
- 11.8 As no Caustic is used to produce HCl, HCl is a more efficient sink for Chlorine than Hypo, in that it enables the production of more “free” Caustic, which can then be used or sold for other purposes.
- 11.9 Roughly the figures for the Tasman Plant’s and Kinleith Plant’s theoretical output of liquid Caustic are:
- 11.9.1 Tasman Plant capacity: []
- 11.9.2 Kinleith Plant capacity: []
- 11.10 At present, due to constraints on the production of Caustic due to the inability to find sufficient “sinks” for chlorine produced as a result of the production of Caustic and that some Caustic is used in the production of Hypo, the Tasman plant currently does not produce at capacity (and operates at approximately []). The Kinleith Plant operates at close to capacity (at approximately []). There are a number of factors and variables that must be taken into account in calculating the production capacities of each plant, which make it difficult to provide an absolute production number.³ Accordingly, the estimated output figures for the Tasman Plant and the Kinleith Plant for liquid Caustic are:
- 11.10.1 Tasman Plant: []
- 11.10.2 Kinleith Plant: []
- 11.11 The Kinleith Plant currently has approx. [] of unused chlorine production capacity. If Kinleith were to operate at a [] utilisation (which, in Ixom’s view, is operationally achievable), then there would be approximately 765 tonnes of additional chlorine available. This, combined with the existing latent chlorine capacity at Kinleith of approx. 1,100 tonnes (which is currently supplied to Ixom, but could be converted to other products instead), provides sufficient additional production capacity for [] of HCl and [] of Hypo (which, in aggregate, requires 885 tonnes of chlorine).
- 11.12 Ixom also manufactures Hypo at a plant in Timaru. The Timaru plant currently operates at [] capacity and supplies Hypo primarily to the South Island for use by customers in the water treatment and the dairy industries. Hypo is primarily supplied in bulk form by road tankers however, IBCs and some 200 litre drums are also supplied.

³ Factors that must be taken into account to calculate a plants production capacity include: a plants uptime or availability (which is calculated as the amount of time a plant is able to produce product over the year, divided by the amount of time in a year); a plant’s utilisation (which is the time when a plant is being used to produce product) and through put rate (which is the amount of electrical charge supplied).

Imports of subject products

11.13 In terms of imports:

11.13.1 Hypo is imported and sold into the South Island by Aakland.

11.13.2 Ixom believes HCl is imported by Redox, Consolidated Chemicals and Clarks primarily in IBCs (not isotainers) for customers who require smaller, packaged quantities of HCl.

11.13.3 Caustic is imported into New Zealand by Ixom and other parties, including Jasol and Ecolab. Larger customers, such as Oji, have also in the past imported their own Caustic themselves and Ixom has also experienced some large customers in Australia choosing to import their own Caustic.

11.14 Hypo is imported in IBCs, drums and 20 litre carboys. HCl is imported in isotainers and IBCs. Caustic is imported in bulk shipping tankers, isotainers, drums, carboys and in dried packaged form for solutioning with water in-country.

Uses of subject products

11.15 Hypo, HCL and Caustic are used by Oji in its pulping processes. Outside of Oji:

11.15.1 Hypo is used in New Zealand for water treatment (in the treatment of both drinking water and swimming pools) or for cleaning or disinfection processes (it is diluted and used as a household disinfectant or forms part of chlorinated cleaners and disinfectants).

11.15.2 HCl is predominately used in NZ to manufacture poly aluminium chloride (PAC) (which is used for coagulation in water treatment and paper making), in metal treatment processes (namely, the removal of iron oxide from steel), pH correction and water treatment processes.

11.15.3 Caustic is predominantly used for process cleaning in a number of industries (particularly in the food manufacturing industry and/or in the formulation of alkaline cleaners) and by Oji in its wood treatment processes. There is also some industrial use of Caustic, mainly for etching and metal cleaning purposes or pH correction. Caustic is also used as a source for sodium and/or alkalinity for chemical reactions (required for pulping and bleaching).

11.16 Oji sources all the Hypo and HCl it uses at its mills from its Tasman Plant and Kinleith Plant, but also sells Hypo and HCl from those plants to Ixom and other suppliers (thereby allowing Oji to produce more Caustic and enabling a domestic supply of Hypo and HCl). Ixom and these other suppliers then on-supply this Hypo and HCl to smaller-scale distributors/retailers (who supply to end-users) and to end-users.

Current production and import figures

11.17 The current local market manufacture and imports of Hypo⁴ are approximately:

Hypo manufacture and imports	
Oji Tasman Plant	
Total Production	[]

⁴ All Hypo figures are at 13% concentration. The concentration percentage reflects the level of chlorine in the product, which is relevant to understand the grade of Hypo and chlorine content.

	Used by Oji at Tasman	[]
	Sold by Oji at Tasman	[] ⁵
Oji Kinleith Plant		
Total Production		[]
	Used by Oji at Kinleith	[]
	Sold by Oji at Kinleith	[]
Ixom SI plant		[]
Imports		[]

11.18 While the amount of Hypo that Oji will need at Tasman will reduce post the Proposed Acquisition, Oji is still expected to require approx. [] of Hypo for consumption at its Tasman mill. Excess Hypo production capacity from the Tasman Plant will be available for sale to third parties from 31 March 2019 (in a slightly greater amount than at present), if the Tasman Plant continues in production.

11.19 The current local market manufacture and imports of HCl⁶ are:

HCl manufacture and imports		
Oji Tasman Plant		
Total Production		[]
	Used by Oji at Tasman	[]
	Sold by Oji at Tasman	[]
Oji Kinleith Plant		
Total Production		[]
	Used by Oji at Kinleith	[]
	Sold by Oji at Kinleith	[]
Imports		[] ⁷

11.20 Oji is expected to require approximately [] of HCl in its Tasman pulping plant post-acquisition.

⁵ Oji has provided Ixom with historical production figures for the Tasman Plant, but the Kinleith Plant figures are Ixom's own estimates. Oji has, however, reviewed the Kinleith Plant figures as part of its review of the draft application.

⁶ All HCl figures are at 33% concentration.

⁷ HCl and Caustic do not have the same degradation issues as Hypo and imports of HCl and Caustic are the same, or similar, quality as HCl and Caustic that is produced domestically.

- 11.21 At present, Caustic⁸ local production (excluding Caustic used by Oji in the manufacture of Hypo) and imports are approximately:

Caustic manufacture and imports		
Oji Tasman plant		[]
Oji Kinleith plant		[]
Imports		[]

12 Competitors

- 12.1 Competitors to Ixom in the supply of Hypo, HCl and Caustic are:

12.1.1 Jasol

Jasol is the trading name for the chemicals and cleaning business of George Weston Foods (NZ) Limited (52216)

Registered Office:

Building 3, Level 2, Central Business Park, 666 Great South Road, Ellerslie, Auckland, 1051, New Zealand

Address for Service

Building 3, Level 2, Central Business Park, 666 Great South Road, Ellerslie, Auckland, 1051, New Zealand

Tel: 0800 429 628 (+64 9 580 2105)

Fax: 0800 384 443(+64 9 571 4388)

Website: <https://jasol.co.nz/>

Contact Person: Bee Ong, General Manager Asia Pacific

12.1.2 Ecolab

Ecolab New Zealand Limited (84857)

Registered Office

Ecolab New Zealand, 6 Daniel Place, Hamilton, 3200, New Zealand

Address for service

Ecolab New Zealand, 6 Daniel Place, Hamilton, 3200, New Zealand

Mailing address

PO Box 10061

Te Rapa, Hamilton, New Zealand 3241

Tel: (07) 958 2333

Fax: (07) 958 2361

Email: customer.services@ecolab.com

⁸ All Caustic figures are at 50% concentration

Website: <https://en-nz.ecolab.com/>

Contact Person: Andrew Langman, Category Manager

12.1.3 Aakland Chemicals

Aakland Chemicals (1997) Limited (841416)

Registered Office

BDO Christchurch Limited, 287-293 Durham Street North, Christchurch, 8013, New Zealand

Address for service

BDO Christchurch Limited, 287-293 Durham Street North, Christchurch, 8013, New Zealand

Tel: (03) 341 8490

Fax: (03) 341 8491

E-mail: admin@aakland.co.nz

Website: <http://www.aakland-chemicals.co.nz/>

12.1.4 Redox

Redox Pty Limited (69924)

Principal place of business in New Zealand

11 Mayo Road, Wiri, Auckland, 2104 , New Zealand

Tel (NZ): +64 9 250 6222

Fax: +64 9 250 6226

Email: info@redox.com (General) or auckland@redox.com (New Zealand)

Website: <https://redox.com/>

Contact Person: John Streeter, Branch Manager

12.1.5 Consolidated Chemicals

Consolidated Chemicals (NZ) Limited (488047)

Registered Office

Robert Wong CA Ltd, 1f/272 Parnell Road, Parnell, Auckland, 1052, New Zealand

Address for Services

Robert Wong CA Ltd, 1f/272 Parnell Road, Parnell, Auckland, 1052, New Zealand

Tel (NZ): +64 (09) 571 0712

Fax: +64 (09) 525 2755

Email: [\[\]@conchem.co.nz](mailto:[]@conchem.co.nz) (for general and sales enquiries)

Website: <http://www.consolidatedchem.com/>

12.1.6 Clarks

Clarks Products Limited (317645)

Registered Office

Building 1, Unit G, 3 Ceres Court, Auckland, 0632, New Zealand

Address for Service

Building 1, Unit G, 3 Ceres Court, Auckland, 0632, New Zealand

Tel: 0800 66 66 33 / 06 843 3163

Fax: +64 06 843 2958

Email: orders@clarkproducts.co.nz

Website: <https://www.clarkproducts.co.nz>

- 12.2 Jasol is the division of George Weston Foods Limited which operates George Weston Foods' chemical and cleaning business. George Weston Foods is a major Australian company, which also operates in the food sector including in New Zealand. Jasol's operations, in relation to the subject chemicals, comprises:
- 12.2.1 Jasol buys Hypo and HCl from [] and sells that Hypo to smaller-scale distributors/retailers and to end-users.
- 12.2.2 Jasol imports Caustic into Tauranga and Auckland and sells that Caustic to smaller-scale distributors/retailers and to end-users. Ixom understands that Open Country Dairy and Fonterra are both major customers of Jasol.
- 12.3 Jasol leases or procures the use of facilities at Tauranga and Auckland to enable it to import Caustic (Ixom is not aware of Jasol importing HCl or Hypo). Ixom understands that Jasol uses third party logistics providers to distribute product to customers from there, and from Oji's Tasman and Kinleith plants.
- 12.4 Ecolab is part of the international Ecolab group, which was founded in the USA. Internationally, Ecolab is a major player in water, hygiene and energy technologies and services markets. In New Zealand, Ecolab's operations, in relation to the subject products, comprises:
- 12.4.1 Ecolab buys Caustic from [] and sells that Caustic to customers in both the NI and SI. Ixom assumes Ecolab also imports some Caustic into Christchurch for sale into the SI.
- 12.4.2 Ecolab buys Hypo from [] and sells that Hypo to end-users.
- 12.5 Ixom believes that Westland Dairy is Ecolab's largest customer. Ecolab won the tender to supply chemicals to Westland Dairy in 2017. [].
- 12.6 Aakland is a reasonably recent entrant into the chemicals supply business. Aakland imports Hypo into Christchurch and sells that Hypo to customers in the SI for agriculture (mostly dairy sheds) and industrial cleaning purposes. Aakland obtains its Hypo from Australian sources. Hypo degrades over time, which means that Aakland is only able to sell imported Hypo at lower concentration than the Hypo manufactured at the Tasman Plant, the Kinleith Plant and by Ixom at its Timaru (South Island) plant. This is fine for the agriculture and industrial cleaning purposes for which Aakland sells its product, but means that Aakland does not supply Hypo for water treatment purposes, which requires Hypo at a higher concentration.
- 12.7 Redox was founded in Australia in 1965, and is a leading chemical, ingredients and raw materials distributor in Australia. Redox manufactures non-chlorine products in Sydney and Melbourne and operates ten sales branches throughout Australia, Malaysia, the United States of America and New Zealand (with branches in Auckland, Christchurch and the Hawkes Bay). Redox is a general chemicals trader (importer and distributor) with a broad chemical product range, including personal care products, detergents, water treatment chemicals, surface coatings and lubricants.

- 12.8 Consolidated Chemicals is a supplier of chemical products for various applications in Australia and New Zealand. Founded in 1972, Consolidated Chemicals specialises in providing a range of products including water treatment, food, personal care, pharmaceutical and cleaning products. Consolidated Chemicals supplies chemicals on a national basis, and is considered by Ixom to be a national player.
- 12.9 Clarks is a New Zealand-owned company that has been operating since the 1960s. Clarks provides cleaning products, chemical solutions, pool and spa products and enviro-green products throughout New Zealand, however has greater market presence in the regions.
- 12.10 Redox, Consolidated Chemicals and Clarks each supply a range of chemicals. They import HCl into New Zealand generally in smaller packet and container sizes, for smaller retail and other competitors. These competitors also supply (or could supply) Hypo and Caustic to customers in New Zealand.
- 12.11 Other competitors for the supply of the subject products include Select Chemicals and Rockingham. Select Chemicals is a local down packer that supplies chemicals to the water treatment industry and smaller customers. Rockingham is a sole trader that provides down packed products to small to medium sized enterprises.

13 Customer uses and major customers

- 13.1 The customer uses for the subject products can generally be classified into the following groups:

13.1.1 Hypo

- (a) For municipal water treatment purposes. Requires Hypo at concentrations of around 13% strength. Major customers are the providers of municipal water supplies. The largest user of Hypo in New Zealand is []. Most municipal water providers use at least some Hypo.
- (b) For wastewater treatment, where lower concentrations of Hypo can be used.
- (c) For agriculture and industrial cleaning. Hypo is a cheap and effective disinfectant/sanitiser. For this purpose, Hypo is sold at much lower concentrations than Hypo sold for water treatment purposes. There are some large users of Hypo for this purpose, but there are also a large number of smaller users.
- (d) For conversion into domestic cleaning products and for pool treatment products.

13.1.2 HCl

- (a) For the manufacture of poly aluminium chloride (**PAC**) (which is used for coagulation in water treatment and paper making). PAC has a number of alternatives but is generally preferred for its effectiveness. The primary users of PAC are [] and a number of others.
- (b) For metal treatment processes. [] are users of HCl for this purpose.
- (c) For water treatment processes for Ion exchange and pH correction which includes some [] sites.

13.1.3 Caustic

- (a) Predominantly used for process cleaning purposes in a number of industries, particularly in the food manufacturing industry. []

[] Caustic soda is not substitutable for any other product for the purposes it is used for. It is offered in different concentrations, but that affects only the

strength of the product and hence the volume that needs to be used. There are a large number of smaller users of Caustic (with annual Caustic requirements of up to 2,000 Tpa).

- (b) For wood treatment processes and the manufacture of pulp and paper. Oji is the largest user of Caustic for these purposes, and uses all Caustic manufactured by it internally (either for those purposes or for the production of Hypo) and buys additional Caustic from Ixom's imported supply of Caustic. [].
- (c) For industrial processes, like metal cleaning and etching processes. These are significantly smaller volumes.

13.2 Appendix 5 sets out Ixom's principal customers and volumes for the subject products and Ixom's best guesses of the volumes for the customers' of Ixom's competitors in the supply market.

14 Customer contracts

14.1 In terms of Ixom's contracts with its major customers, Ixom has:

14.1.1 [].

14.1.2 []

14.1.3 []

14.1.4 []

14.1.5 []

14.2 Ixom's standard customer contract, used with most smaller customers to whom Ixom sells on a spot basis, []. There are some smaller customers for Caustic where Ixom owns the customer equipment, and therefore has contracted supply, but these customers are not large by volume or number. Ixom does not own equipment on customer sites for Hypo and HCl.

15 Customer equipment

15.1 In terms of customer equipment, whilst some special customer equipment (e.g. tanks, pumps, pipelines) is required to store, handle or use the subject products, that equipment is not specific to the products of any specific supplier. Most of the equipment is owned by customers, except that:

15.1.1 Some formulated Caustic for cleaning is sold in commercial packages, which includes dosing equipment this would be less than 5% of the market. Typically the customers have buy out clauses and other suppliers have similar equipment. For most customers the value of this equipment is typically less than \$100K per customer.

15.1.2 Ixom has some smaller volume Caustic customers where it owns the tanks and has contracted supply []. These tanks on customers' sites could be replaced for ~\$50-100k per tank. These customers represent only []

Part 5: Competition Analysis

16 Overview of competition issues

- 16.1 The Proposed Acquisition involves two sets of market changes that may be seen to raise potential competition issues, namely:
- 16.1.1 The merger of Ixom's SI production of Hypo with Oji's NI production and wholesale supply of Hypo (the "horizontal merger" issues).
- 16.1.2 The acquisition of the production plant of a manufacturer and wholesale supplier of chemical products (being Oji) by one of its customers in the wholesale market (being Ixom) (the "vertical merger" issues).
- 16.2 Ixom considers that the situation under the counterfactual would not be any more competitive than what would occur if the Proposed Acquisition proceeds (the factual situation). Under both the factual and counterfactual scenarios, Ixom is likely to reach the same or similar market situation, face the same or similar competitive constraints, and the position of competitors will be the same or similar.
- 16.3 Ixom therefore considers that the Commission can be satisfied that the Proposed Acquisition will not substantially lessen competition.

17 Previous Commission consideration

- 17.1 The Commission considered Oji's acquisition of the Tasman Mill from Carter Holt Harvey, which included the Tasman Plant, in Decision No. [2014] NZCC 18. The Commission granted a clearance to the acquisition. There is no consideration of any issues relating to the Tasman Plant in the public version of the Commission's decision.

Overseas cases that consider the subject products

- 17.2 [

.]⁹

- 17.3 The Competition Tribunal of South Africa in *Chlor-alkali Holdings (Pty) Ltd v Botswana Ash (Pty) Ltd*¹⁰ considered an acquisition by Chlor-Alkali Holdings (CAH) of Botswana Ash, both of which manufactured various grades of salt. The acquisition also had a vertical dimension as CAH's wholly owned subsidiary company manufactured and distributed chlorine and caustic soda (and chemical grade salt is used as an input in the production of both those products, as further described in Appendix 4). The Competition Tribunal examined the vertical effects of the acquisition in the market for the production and sale of caustic soda and considered the caustic soda market to be national in scope, taking imports into South Africa into account (which made up a small proportion of the market). The Tribunal:

17.3.1 Considered the barriers to entry were relatively high in this market on the basis of prohibitive government regulatory requirements that a new entrant in the chlor-alkali markets must adhere to (a competitor submitted it would take approximately three years to finalise the regulatory obligations).

17.3.2 Held there were significant foreclosure concerns and incentives for the merged entity to increase salt prices to benefit CAH's subsidiary, directly impacting downstream rivals.

- 17.4 Despite that, the Tribunal approved the acquisition subject to certain conditions.

- 17.5 The European Commission, in *SOLVAY/MONTEDISON/AUSIMONT (Merger) - COMP/M269 [2002] ECTComm 12 (9 April 2002)*, conditionally approved the acquisition of an Italian chemicals company, Ausimont, by leading international chemicals group, Solvay. The

⁹ [].

¹⁰ *Chlor-alkali Holdings (Pty) Ltd v Botswana Ash (Pty) Ltd* (34/LM/Apr09) [2010] ZACT 32 (14 May 2010).

transaction was conditionally approved on the basis that Solvay sold and ceased certain product activities upon acquisition. In assessing the transaction, the Commission considered a range of chemical product markets that were horizontally affected by the transaction including caustic soda, sodium hypochlorite and hydrochloric acid. The Commission:

- 17.5.1 Left the exact definitions of the relevant product and geographic markets for caustic soda, sodium hypochlorite and hydrochloric acid open, on the basis that even the most narrow market definitions would not cause any competition concerns to arise in regards to these products.
 - 17.5.2 Did still note that market investigation pointed towards liquid caustic soda being a distinct product market from solid caustic soda, and caustic soda's geographic market being broader than just national. The Commission considered that because most sodium hypochlorite was sold within 300 kilometres of its point of production, the geographic market was either central Italy alone or the whole Italian territory. In its assessment of hydrochloric acid, the Commission considered that there could either be a single product market or two separate product markets (premium grade and technical grade) and that the geographic market could be national (i.e Italy) or northern and central Italy specifically.
- 17.6 In the end, the Commission concluded that Solvay's acquisition of Ausimont did not raise any competition concerns that threatened to create a dominant position in the caustic soda, sodium hypochlorite or hydrochloric acid markets.

18 Counterfactual

- 18.1 Ixom considers that the counterfactual scenario, if the Proposed Acquisition does not proceed, is that:
- 18.1.1 Oji will close down the Tasman Plant.
 - 18.1.2 Oji will then obtain all its HCl and Hypo for use at its Tasman mill from its Kinleith Plant, reducing the amount of HCl and Hypo available from the Kinleith plant to Ixom and other suppliers.
 - 18.1.3 Oji will buy more imported Caustic from Ixom, and possibly other suppliers, to meet ongoing demand for Caustic at Oji's Tasman mill.
 - 18.1.4 Ixom will build a Hypo plant in the NI to ensure supply of Hypo to its NI water treatment customers although there would likely be a material shortage of Hypo in the NI for 12 – 18 months.
 - 18.1.5 Ixom and other suppliers would import more HCl to ensure supply of HCl to their customers.
 - 18.1.6 Ixom would relocate its SI Hypo plant to its Mount Maunganui site, to meet demand while the Hypo plant is being built.
 - 18.1.7 Aaklands' imports of Hypo into the SI would continue. There may also be new imports of Hypo by Aaklands or other parties into the NI for industrial purposes.
- 18.2 As noted above in paragraphs 7.1.1 and 7.1.2, Oji no longer wishes to operate the Tasman Plant. Oji has said to Ixom that if Ixom does not buy the plant, Oji will close it down on 31 March 2019. Oji's board of directors has approved the proposal to shut down the Tasman Plant as at that date, and Oji has informed its employees and their union of the close down date. [.]
- 18.3 The Tasman Plant is a designated major hazard facility (**MHF**), and is situated on land owned by Oji and is situated both in location and functionally within Oji's overall Tasman mill site. As

a consequence, Ixom believes Oji will want to have the Tasman Plant operated by an experienced operator of chlor alkali plants, who has the systems, personnel and expertise to safely manage and operate such a plant.¹¹ Ixom considers it is the only company in a position to meet those requirements and understands that is also Oji's view. Ixom believes this is because, among other things:

18.3.1 Ixom operates two chloro alkali plants in Australia which have been operating under the Australian MHF regulations (which are similar to New Zealand's MHF regulations) for approx. 10 years. Ixom operates an additional 8 MHF sites across Australia and New Zealand.

18.3.2 Ixom has thorough subject matter experience in the safe operation of chloro alkali plants in Australia, and a competent team in New Zealand. In developing its own MHF submissions and safety case, Oji visited Ixom's Australian plants and as a result gained an understanding of Ixom's technical capabilities. In addition, Oji has engaged Ixom's subject matter expertise to conduct assessments on plant safety, reliability and maintenance at Oji's Kinleith Plant.

18.3.3 [.]

18.3.4 Oji has experienced first-hand how Ixom manages a chemical plant in close proximity to an Oji manufacturing operation. Ixom and its predecessors have operated a dedicated oxygen plant at Kinleith since 1990 which supplies oxygen to Oji's mill at Kinleith 350 days per annum on a 24 hour per day basis.

18.4 In addition, there is no other operator with specialist chlor alkali chemical plant operating experience with an interest in New Zealand. In this regard:

18.4.1 While George Western Foods operates the Jasol business in New Zealand, that business is focussed on cleaning products with some chemicals' distribution. Overall, George Weston Foods' focus is on the food manufacturing industry, and it has no experience in running a chlor alkali plant or a major hazard facility.

18.4.2 If any other operator of a chlor alkali plant were to be interested in the Tasman plant, that operator would only likely come from Australia. However, of the two other Australian operators of chlor alkali plants (i.e. other than Ixom):

- (a) Omega does not have the balance sheet to justify risking entry into the NZ market [.]¹² Omega Chemicals is owned by Chemprod Nominees Pty Limited. The address for service is PO BOX 260 Caulfield South VIC 3162 Australia.
- (b) While Coogee has the financial resources to acquire the Tasman Plant, Coogee (and Omega), has no distribution networks or customers in New Zealand to justify the risk of taking on the Tasman Plant. Coogee is operated by Coogee Group, which is owned by Coogee Chemicals Pty Limited. The registered address for service for Coogee Group is PO Box 5051 Rockingham Beach WA 6969.

18.5 If the Tasman Plant were to shut, Ixom would build a new Hypo plant¹³ in the North Island (with latent capacity) to meet local demand and address reliability of supply concerns in NZ. It

¹¹ [.]

¹² []

¹³ Such a plant would operate on a different basis than a chlor alkali plant, by Ixom importing key chemicals raw materials – being chlorine and caustic soda – into New Zealand and manufacturing sodium hypochlorite in New Zealand using those materials plus water to dilute the hypochlorite to ~13% strength. It is therefore cheaper to build and operate, and easier to operate, than an entire new chlor alkali plant, although it does not enable the production of the same range of chemicals.

is difficult to import Hypo for water treatment purposes from overseas, as Hypo breaks down over time, with its concentration dropping to below the level needed for water treatment purposes. In addition, one of the products that accrues from the breakdown of Hypo is sodium chlorate, the presence of which is undesirable in water and municipal water suppliers are becoming more and more concerned about this issue.

- 18.6 Ixom has priced the cost of building a new Hypo plant (and calculated the likely capital expenditure required to build the plant) and engaged engineers to provide detailed specifications. The cost of the plant is estimated to be between [] (if built from scratch, without the benefit of existing infrastructure). A stand-alone Hypo Plant is much simpler than a chlor alkali plant and hence much cheaper and quicker to build. The plant would have capacity to meet all hypochlorite demand in New Zealand with some spare capacity to service increases in demand for that product.
- 18.7 Appendix 6 attaches []
- 18.8 It is possible, under the counterfactual that another party could also build a Hypo plant ([]), especially if Ixom sought to increase the price of Hypo. Such a plant would be cost-competitive with any new plant built by Ixom. []
- 18.9 Also, under the counterfactual, imports of HCl and Caustic will need to expand to meet NZ demand. There is plenty of both chemicals available for sale from producers in the Asia-Pacific region, at reasonable prices. In this regard:
- 18.9.1 The increased Caustic demand will come from Oji, in order to supply ongoing demand at Tasman of approximately []. Ixom would be able to meet this demand through its existing facilities at Tauranga, and expects that other importers (e.g. Jasol) would also have capability. []
- 18.9.2 Existing importers of HCL would be able to increase their supply to meet market demand, and Ixom and possibly others would be in a position to import HCl.
- 18.9.3 [] Ixom Australia exports HCl to its largest offshore HCl customers for approximately []. Internationally, HCl is available at a very low cost. []

19 Relevant markets

- 19.1 Ixom considers that it is appropriate to consider the effect of the Proposed Acquisition in the wholesale markets for the supply of Hypo, HCl and Caustic. For HCl and Caustic, Ixom has taken a nationwide market definition. For Hypo, Ixom has taken both a nationwide market definition and separate NI and SI market definitions.
- 19.2 Section 3(1A) of the Commerce Act defines the term “market” as “a reference to a market in New Zealand for goods or services as well as other goods or services that, as a matter of fact and commercial common sense, are substitutable for them”.
- 19.3 Case law has defined a market as the area of close competition between firms or the field of rivalry between them.¹⁴

¹⁴ *Re Queensland Co-operative Milling Assoc Ltd* (1976) 25 FLR 169.

Market levels

- 19.4 Ixom considers it appropriate to consider the impact of the Proposed Acquisition in the wholesale import markets because:
- 19.4.1 HCl and Hypo are supplied at the wholesale level by Oji from its Kinleith and Tasman plants to Ixom and others [(), who on-supply to smaller-scale distributors/retailers (who supply to end-users) and to end-users.
- 19.4.2 Post-acquisition, Ixom will supply [], and intends to supply other resellers and end users, as well as itself, with Hypo and HCl from the Tasman Plant.
- 19.4.3 Wholesale supply from the Tasman and Kinleith plants compete with imports, with some importers (including Ixom) selling some of the product they import to other resellers.
- 19.5 A diagram setting out the different market levels is set out at Appendix 7.
- 19.6 At the wholesale market level, the products sold by Oji and by importers are essentially the same. They are the same chemical and at the same or similar concentrations. Suppliers (such as Ixom) may then dilute the chemical further and/or add other chemicals to adjust the way in which a chemical works before on-selling it. The only difference between wholesalers is in whether or not they offer in bulk (e.g. by tanker, Isotainers, drums or dry packets). Customers purchase in different container forms primarily on the basis of the volume of product required and in accordance with the size container required by their end customer (which is most likely due to the degradation issues and the ability to easily buy in those size containers offshore to avoid double handling).
- 19.7 As far as Ixom is aware, Oji does not arrange tanker transport, schedule deliveries or arrange down packing so customers wishing to purchase directly from Oji would need to arrange these things themselves (or purchase from distributors who can transport and, if required, down pack and deliver directly to the customer site). Further, Oji is a manufacturer of pulp and paper (not a chemicals distributor), and most customers would not purchase products in sufficient quantities for Oji to supply.
- 19.8 Ixom competes with a number of parties in the supply of these chemicals to smaller distributors, retailers and end-users. Ixom has called this the supplier market for the purposes of this application. These competitors include Jasol, Ecolab, Aaklands and Interchem. The market shares of Ixom and other suppliers in the supplier markets are relevant to the assessment of the vertical effects of the merger.
- 19.9 For the purpose of the analysis of vertical merger issues, Ixom proposes that separate supply markets for Hypo, Caustic and HCl be identified. The reasons for this are set out below.

Product concentration, formulation and sizes

- 19.10 Ixom has defined single markets for each of the subject chemicals and not sought to differentiate on basis of product concentration, formulation, form (e.g. dried or liquid) and container size, or use.
- 19.11 For Caustic, while suppliers often add additional products to change some aspect of the performance of Caustic (e.g. a surfactant) to meet customer needs, or dilute liquid Caustic, the basic and key ingredient remains Caustic. Also, those additional products can be added by all or most suppliers, and comprise only a small amount by volume and cost of the product sold.
- 19.12 There is limited differentiation on concentration and formulation of HCl products in downstream markets, and those differences can be provided by most suppliers. Different levels of concentration of Hypo are suitable for different uses of the product and the applicable constraints for each form of use are different. This is discussed in paras 19.19 to 19.26 below. However, the Hypo sold at wholesale from the Tasman and Kinleith plants is all at the same

concentration: its dilution into different concentrations occurs at later stages of the supply chain.

- 19.13 The supply of product is in bulk from Tasman and Kinleith, and is down-sized where necessary by suppliers. Each of the products are dangerous chemicals which require safe handling and transportation in specialist trucks or trailers. While different suppliers may supply product in different containers/packages and sizes (or the weighting of the different containers and sizes supplied by them may differ), most of them (and especially Jasol and Ecolab) can down-size or up-size the product package size purchased at wholesale by re-filling, to meet specific customer needs. For the purposes of analysis of the vertical merger issues, suppliers (in particular, larger suppliers like Jasol and Ecolab) are able to change between containers and sizes, and most are capable of providing product in the sizes and products sought by customers (with the exception of small operators).
- 19.14 These different container/package sizes do correlate to some degree with customer size. Ixom has not sought to differentiate markets on customer size, as there is some overlap of customers, and some suppliers (eg Ixom itself) can provide across the whole container/packaging size range. However, there are differences in market share in different segment sizes, which is relevant to the consideration of the competitive impacts of the proposed acquisition.
- 19.15 Ixom has also not sought to describe different supply markets by use (which is also related to the degree of concentration or dilution of the relevant product). Where there are other reasonably substitutable products in particular uses (e.g. for Caustic for etching and metal-cleaning) those are usually only for relatively small volumes, and do not greatly affect market demand at the wholesale level for Hypo, HCL or Caustic. Also, they are for the most part in market segments in which Ixom has a [] share than in the combined supplier market for the relevant product (e.g. in the segment for the use of Caustic for etching and metal-cleaning, Ixom's market share is approximately []).
- 19.16 Further, while it might be possible to define separate supplier markets for the subject products by concentration, container size/type and use, Ixom does not consider that this would affect the analysis of the vertical market issues and is unnecessary (and there is, in any case, considerable supply side substitutability when it comes to differing degrees of concentration/strength of product and packaging/container size).

Products are differentiated from each other

- 19.17 Ixom considers that it is appropriate to define separate markets for Hypo, HCl and Caustic because those chemicals are used for different purposes, and are not substitutable for each other.

Differentiation from other products

- 19.18 While some products are substitutable at the supplier market level for the subject products, Ixom has treated the subject products as being in separate markets, for the reasons below.
- 19.19 **Hypo:** Most Hypo customers use Hypo for water treatment (approx. [] of Ixom's Hypo customers are in the water treatment industry) or for cleaning or disinfection processes. In the water-treatment industry customers could substitute the product with chlorine, which is the preferred water treatment chemical by water treatment authorities in Australia. Chlorine is considered a better disinfectant than Hypo. However, chlorine is a more hazardous product to use than Hypo, requiring more specialist equipment and procedures (e.g. a fire rated building, separation distances, sensors, automatic system shutoff mechanisms), and its safety risks can limit the areas in which it is used (e.g. it is not favoured for use in water treatment facilities that are located in built up areas).
- 19.20 While more expensive by weight, chlorine is more concentrated, so it is difficult to work out a direct price comparison (chlorine is practically 100% strength product in terms of Free Available Chlorine (FAC) and Hypo is 13% strength product in terms of FAC). In Australia, Ixom's experience is that customers don't switch between chlorine and Hypo for price reasons

but, rather, because of handling and effectiveness considerations. The cost of the two products range significantly in New Zealand:

19.20.1 Chlorine can cost anywhere from \$2500-\$4000 per tonne for large pack sizes and from \$5500-\$7500 per tonne for small pack sizes depending on volumes and delivery location.

19.20.2 Hypo can cost anywhere from \$800-\$1200 per kilolitre (KL) for bulk and from \$900-\$2500 per KL for packaged product in 200L-1000L packages.

19.21 It is possible to substitute Hypo in water treatment uses with either:

19.21.1 An on-site Hypo generator, which produces Hypo on-site for customers by combining salt, water and electricity. [] use on site Hypo generation, which Ixom considers operates as a constraint on Ixom's pricing of Hypo. Ixom does not have relevant cost comparisons as the cost of the generator is very dependent on the requirements of the particular site. On-site Hypo generators are:

- (a) Available in a variety of sizes and chemistries, and are scaleable to produce a range of volume and rate demands. For example, Miox, a US based manufacturer of on-site generators for water disinfection, offers Hypo units for customers requiring water treatment for volumes as small as 1-2 pounds/day to up to 2000 pounds/day.¹⁵
- (b) More commonly used by customers who require Hypo in the potable water and aquatics segments (although are a realistic alternative in the wider water treatment market also). Customers who use Hypo to treat water used in swimming pools and potable water have raised the possibility of switching to on-site Hypo generation to Ixom. In Ixom's view, customers who use Hypo for wastewater disinfection would be unlikely to use on-site Hypo as an alternative to Hypo, and Ixom considers that UV would be the logical alternative for that particular use (discussed below).

19.21.2 UV, which can also be used to treat water. [] to reduce its requirements for Hypo at that site. UV can also be used to reduce the amount of Hypo needed at a site, even if that need is not completely eliminated.

19.21.3 Lower concentration Hypo is also an option for wastewater treatment.

19.22 Hypo is also used for general cleaning purposes in the agricultural (e.g. dairy sheds) and industrial sectors. In this use, it is utilised in much lower concentrations than Hypo used for water treatment (which as discussed below, makes imported Hypo a feasible alternative for locally manufactured Hypo). Hypo in this lower cost form is a low price but effective cleaning chemical.

19.23 Chlorine dioxide, peroxide and peracetic acid are three chemicals that could be used as substitutes for Hypo in its cleaning and disinfection uses. Chlorine dioxide, peroxide and peracetic acid are very effective disinfectants, but cost a lot more than Hypo and are used where greater efficacy is needed.

19.24 For the purposes of this application, Ixom has considered narrower Hypo markets, rather than a wider market including these other chemicals and services. This is because of the difficulties in making price comparisons. Any competitive issues are more likely to arise in the narrower market than the more widely defined market.

¹⁵ <http://www.miox.com/products/on-site-generation/>

- 19.25 Ixom also considers that it is appropriate to define a wholesale market involving only Hypo as Hypo bought at wholesale may be sold into a variety of uses at the next level of the supply chain, but it is still a largely homogeneous product.
- 19.26 Ixom has, however, considered chlorine, on-site Hypo generation and UV as competitive constraints on the actions of Ixom.
- 19.27 **HCl:** outside of use by Oji, HCl is predominately used in NZ to manufacture poly aluminium chloride (**PAC**) (which is used for coagulation in water treatment and paper making), in metal treatment processes and water treatment processes.
- 19.28 HCl is also used directly in water treatment as a proton donor, such as where there is an ion exchange or pH correction. For that particular use, sulphuric acid is the preferred alternative, on the basis that:
- 19.28.1 It requires less expensive storage and handling equipment;
- 19.28.2 Most HCl storage and dosing systems can be changed to sulphuric acid for minimal cost;
- 19.28.3 HCl is six times weaker than sulphuric acid on a weight for weight basis with the result that sulphuric acid, because it is more concentrated, is more cost effective for pH correction and exchange resin regeneration.
- 19.29 Approximately 50,000Tpa of Sulphuric Acid is used in New Zealand for this purpose as opposed to approximately 1,000Tpa of HCl.
- 19.30 For ion exchanges or pH correction, HCl is only substitutable by sulphuric acid for the very particular use noted in paragraph 19.28. Otherwise, HCl is not practically substitutable for any other chemical.
- 19.31 PAC has a number of alternative chemicals (including Alum, aluminium chlorohydrate, ferric chloride and organic coagulants), however PAC is generally preferred for its effectiveness.
- 19.32 **Caustic:** Caustic is predominantly used for process cleaning in a number of industries (particularly in the food manufacturing industry). For that purpose, there is no other product that can be substituted at a reasonable price.
- 19.33 Oji uses Caustic in its pulp processes. Soda ash and magnesium oxide are substitutable for Caustic in pulping and bleaching applications, and Ixom notes that in the global pulp industry switching between these products does occur when the price of Caustic significantly escalates internationally. This has been considered, but not implemented, in New Zealand.
- 19.34 There is also some industrial use of Caustic, mainly for etching and metal cleaning purposes.
- 19.35 Lime and soda ash can be used instead of Caustic in many water treatment applications. However, handling of lime and soda ash is more difficult (as they are powders) as the handling equipment is more expensive, makes more mess and dosing is less reliable. Accordingly, Caustic is the preferred alternative for those uses.
- 19.36 While there are some substitutable products at the retail level for some products (e.g. there are alternatives to Caustic for etching) those volumes are small.

Markets are national markets

- 19.37 Ixom considers that the appropriate scope of the geographic markets for HCl and Caustic is nationwide. This is because:
- 19.37.1 Suppliers in the supplier market for each of the products are able to supply customers across the country, either through their own transportation fleets, third party logistics

providers or specialist chemical couriers. The point of import or manufacture does not limit the geographic scope of supply (e.g. Ecolab's bulk production is based in Hamilton and it still supplies to customers in the South Island). Import statistics show HCl is imported into both the North Island and the South Island (in IBCs at \$320 to \$540 per tonne). The bulk of Caustic is imported which suggests that the appropriate economic definition of the geographic dimension of the market for Caustic is larger than New Zealand (though of course the Commission is bound by the Act to define a market no larger than New Zealand).

19.37.2 Customers have previously switched between competing suppliers whose points of manufacture are located in different geographic locations in response to relative change in prices. For example:

(a) [].

(b) [].

(c) []

(d) []

19.37.3 Customers are able to respond to an increase in price by substituting with products from a competitor based elsewhere in New Zealand. Accordingly, competitors with points of manufacture in the North Island exert a restraining influence on competitors based in the South Island.

19.37.4 Supply of HCl at the wholesale level is currently on a nationwide basis, with most HCl supplied from Kinleith or Tasman.

19.38 For Hypo, Ixom considers it appropriate to use a nationwide market definition. This is because:

19.38.1 It is possible to supply either island from imports into one island. For example, formulated Hypo based products are manufactured in both the North Island and South Island with distribution to both Islands by Ecolab (Hamilton) and Jasol (Auckland). Also, when there is an outage of its SI plant, Ixom will supply SI customers in the water treatment segment from its imports from the North Island.

19.38.2 An option for Ixom, if the Tasman Plant closed, would be to increase production from its SI Hypo plant and ship some of that product into the NI.

19.38.3 It is possible that Aaklands could expand its sales into the NI either by shipping product from Lyttleton or directly from Australia to a port in the NI.

19.38.4 It is also possible that other importers could seek to import Hypo into the NI then onto the SI or, if they established a new Hypo plant in the NI, ship product from that plant to the SI.

19.39 Ixom acknowledges that it could be possible to define separate NI and SI markets. This is because at the present time, the SI is served mainly with Hypo from Ixom's SI Hypo plant and Aakland's imports through Christchurch. Due to shipping costs, it is generally more cost effective for Ixom to sell Hypo manufactured at its SI plant than to bring in supplies from the NI and, [

]

19.40 However, any competition issues are more likely to arise with a nationwide Hypo market definition than with separately defined NI and SI markets. Accordingly, for convenience, Ixom has used a national market definition in its analysis of the competition issues below.

Supply-side substitution

- 19.41 There is a potential argument that Hypo and HCl should be considered in the same market even though they are not substitutable by customers on the basis that they are substitutable on the supply side. Ixom does not think the Commission should adopt such a market definition, but has discussed this possibility below.
- 19.42 Such supply-side substitution is possible at least in relation to production of such chemicals at large chlor alkali plants (such as the Tasman and Kinleith plants). At such plants the chlorine that is produced can be converted into either HCl or Hypo at the option of the plant owner. Accordingly, if, for example, a wholesale supplier of Hypo was to increase prices of Hypo above a competitive market price, another owner of a chlor alkali plant could adjust its levels of production of HCl and Hypo so as to produce more Hypo.
- 19.43 The scope for such supply-side substitution is, however, limited in New Zealand. Other than the Tasman Plant, only the Kinleith plant is capable of shifting production as between HCl and Hypo. Further, it is not likely that any new full scale chlor alkali plant will be constructed in New Zealand in the next few years given the expected cost of such a plant (\$70 million) and the limited size of the NZ market. Also, any incentive to shift HCl production to Hypo production at Kinleith is dampened by the fact that a side effect of such a change is also a lower production of Caustic, as Hypo is not as effective a sink for chlorine as HCl.
- 19.44 Having regard to these considerations, Ixom considers it appropriate to define separate markets in relation to each of Hypo and HCl while taking into account, as a constraint on Ixom's actions in each of those markets, the potential ability of Oji to adjust the levels of production of Hypo and HCl at Kinleith.

Estimated market shares

- 19.45 Estimated current market shares are set out in Appendix 8. The market shares are estimated based on figures provided by Ixom and Oji.

20 **Horizontal merger issues**

- 20.1 Ixom has considered whether any horizontal merger issues arise that could cause, or be likely to cause, a substantial lessening of competition in any market.
- 20.2 Under the Commission's merger guidelines, a merger between competing suppliers is seen as having the potential to substantially lessen competition in a market if the merger:
- 20.2.1 removes a competitor that provides a competitive constraint, resulting in the ability for the merged firm to profitably increase prices; or
 - 20.2.2 increases the potential for the merged firm and all or some of its remaining competitors to coordinate their behaviour so that output reduces and/or prices increase across the market.
- 20.3 Ixom does not consider that this will be the case, for the reasons set out below.

Hypo wholesale market

- 20.4 Ixom has a Hypo plant in the South Island which has the capacity to manufacture approximately []. The remaining demand for Hypo in the South Island is met by imports from Australia (imported by Aakland) and some product transported by Ecolab and Jasol from the North Island.
- 20.5 The North Island demand for Hypo is met by Oji's two plants in the North Island and a small amount of imports. This product from Oji's plants is purchased at wholesale by Ixom, Jasol and other operators and sold by them to their customers.

- 20.6 As noted above, Ixom has analysed the horizontal merger issues on the basis that the Hypo wholesale market is a nationwide market. (If the North Island and South Island wholesale markets are separate, then Ixom does not consider that there are any issues, as Ixom's SI production could not be said to compete with Oji's NI production).
- 20.7 The Commerce Commission's merger guidelines set out 'concentration indicators' to assist in determining whether a horizontal merger raises competition concerns. Under these indicators a merger or acquisition will be less likely to raise competition concerns where, post-merger the three largest firms in the market have a combined market share of:
- 20.7.1 less than 70% and the merged firm's market share is less than 40%; or
- 20.7.2 70% or more and the merged firm's market share is less than 20%.
- 20.8 The merger guidelines are difficult to apply in a strict sense as no horizontal aggregation of market share will occur in the wholesale market for Hypo, as Ixom does not currently wholesale Hypo. Ixom's SI plant produces Hypo that is sold only by Ixom.
- 20.9 However, as a result of the Proposed Acquisition, Ixom acknowledges that it will hold a substantial proportion of the New Zealand manufacturing capacity for Hypo. Ixom acknowledges that the impact of the Proposed Acquisition in the wholesale market therefore needs to be considered.
- 20.10 For example, if Ixom's own manufacture and imports by Aaklands are considered in a general sense to compete with manufacture and wholesale from Oji's plants, then post-transaction:
- 20.10.1 The total market demand in NZ for Hypo, excluding Oji own-supply ex-Kinleith, post-transaction will be approximately [] (see Appendix 9).
- 20.10.2 Oji's Kinleith plant will continue to have capacity to supply at least [] tonnes of Hypo per annum (after setting aside Hypo consumed by Oji for internal purposes), giving Oji approximately [] market share in the market for wholesale supply.
- 20.10.3 Aakland's market share [(]), if it continues to supply, will be [] of the wholesale market.
- 20.10.4 This leaves [] of Hypo to be supplied by Ixom ([]¹⁶ from Tasman and [] Tpa from its SI Hypo plant). This means, post-acquisition, Ixom will have market share of approximately [].
- 20.11 Under this analysis, Ixom's proposed acquisition of Oji's Tasman plant will breach the concentration indicators noted above. The three firm concentration ratio will be 100%, and Ixom's market share will exceed 40%.
- 20.12 Nevertheless, in Ixom's view, the acquisition will not have the effect or likely effect of substantially lessening competition in the Hypo wholesale market, as Ixom will face at least the same or similar competitive constraints in the factual as it would under the counterfactual. These constraints are discussed further below.
- 20.13 In comparison to the factual scenario, the market shares in the Hypo wholesale market under the counterfactual scenario (discussed further at paragraph 18 above) would be as follows:
- 20.13.1 The total market demand in NZ for Hypo, excluding Oji own-supply ex-Kinleith, post-transaction will be approximately [] (see Appendix 9).
- 20.13.2 Oji's Kinleith plant will continue to have capacity to supply approximately [] of Hypo (after setting aside Hypo consumed by Oji at the Kinleith (approx. [])

¹⁶ This is a reduction of 1,000T from the current production of Hypo from Tasman, and reflects the reduction of the demand for Hypo from Oji's pulp processing plant.

and the Tasman mill (approx. [] for internal purposes), giving Oji approximately [] market share in the market for wholesale supply.

20.13.3 Aakland's market share [(), if it continues to supply, will be [] of the wholesale market.

20.13.4 This leaves [] of Hypo to be supplied by Ixom and/or a new entrant or existing competitor that has the resources to build a Hypo plant in NZ. If the Tasman Plant shuts down, Ixom intends to build a Hypo plant in the NI to ensure the continuity of Hypo supply to its NI water treatment customers, although there would likely be a material shortage of Hypo in the short term. Ixom's contingency plan in the counterfactual is to move its South Island Hypo plant (discussed further at paragraph 18.1.6 above) to its Mount Maunganui site in order to maintain supply while it builds a Hypo plant in the North Island. Ixom estimates moving the Hypo plant to the NI will involve a reasonable amount of capital and runs the risk of significant supply disruption while the plant is decommissioned and recommissioned (which could take between 3 to 6 months). This means, post-acquisition, Ixom could have market share of up to [].

20.13.5 There may also be new imports of Hypo by Aaklands or other parties into the NI for industrial purposes.

20.14 The Proposed Acquisition will not, compared to the counterfactual, increase the potential for the merged firm to unilaterally exercise market power. Further, the Proposed Acquisition will not increase the potential for the merged firm and all or some of its remaining competitors to coordinate their behaviour compared to the counterfactual in respect of Hypo, as a result of the constraints from Aaklands, potential new plants and imports, and competition from alternative products and services as discussed below.

Competition from existing manufacturers/importers

20.15 Under the factual, there will still be [] of Hypo available for other parties from Oji's Kinleith plant. Post-acquisition, Oji will face the same incentives as Ixom to sell that Hypo into the market (both for the revenue obtained from the sale of Hypo and because Hypo operates as a sink for Chlorine, enabling the production of more Caustic) and similar operating costs. It is likely that Oji will be able to price competitively to Ixom. The ability of Oji to increase output at Kinleith from approx. [] operating capacity to [] operating capacity and to divert its latent chlorine currently sold to Ixom to the production of HCl and Hypo will also place a significant constraint on Ixom post acquisition. If Oji were to do so, Ixom estimates an additional [] of HCl and [] of Hypo could be produced at Kinleith. Oji could, in theory, divert all of this latent capacity to increase Hypo production (and not HCl), which would result in approx. [] of Hypo and no HCl.¹⁷

20.16 In comparison, under the counterfactual, only [] of Hypo will be available from Kinleith, as Oji will need to source Hypo from Kinleith for both its Tasman and Kinleith mills. The Kinleith plant will therefore place less of a constraint on Ixom under the counterfactual.

20.17 Aakland's imports of Hypo into the SI will continue to place a reasonable constraint on Ixom's actions in the SI, at least in relation to sales of Hypo for agricultural cleaning and disinfection. This is demonstrated by the fact that Ixom is running its SI plant [] capacity. Aakland's imports of Hypo for agricultural cleaning and disinfection will not be affected by anticipated future changes in drinking water standards. This constraint will be the same under the factual and counterfactual.

¹⁷ The additional [] of Hypo would be in addition to existing Hypo volumes produced at Kinleith for resale, and would not affect existing volumes of HCl produced at Kinleith for resale.

- 20.18 In summary, Ixom considers that the situation under the counterfactual of the Tasman Plant closing down and Ixom building its own NI Hypo plant would not be any better in terms of the competitive situation in the market, and may well be less competitive.

Competition from potential new plants and new imports

- 20.19 Ixom considers it a reasonable likelihood under the factual that another supplier could build a Hypo plant in New Zealand, if Ixom were to seek to raise the price of Hypo post-acquisition. Ixom's own investigations of the option of building a new plant support the proposition that there is a real chance of another supplier building such a plant (see [] in Appendix 6). Further, competitors have in the past built or threatened to build a Hypo plant where the plant owner was not running the plant competitively (i.e. by increasing prices or failing to meet demand). Examples of this are as follows:

20.19.1 [].

20.19.2 [].

- 20.20 Ixom estimates that it would likely cost about [] for a new operator to build a new Hypo plant in New Zealand (being the same cost that Ixom has considered it would be able to build such a plant on a new site). The threat of this occurring will place a constraint on Ixom.

- 20.21 There is also a threat of new entry of imports of Hypo into the NI for cleaning and disinfection purposes, similar to what Aaklands has achieved in the SI. There are little to no supply chain constraints on Aaklands (or another new entrant) importing Hypo into the North Island from overseas for cleaning and disinfection purposes.

- 20.22 Ixom does not expect, in future, that imports of Hypo for water treatment purposes will be viable, given expected changes in drinking water standards. Such imports are not currently occurring, in any case¹⁸. However, there are other significant competitive constraints that operate in relation to the use of Hypo for water treatment purposes as discussed below.

- 20.23 Ixom does not consider that the situation under the counterfactual of the Tasman plant closing down and Ixom building its own NI Hypo plant would be any different in terms of the potential for new plants and imports, and may even be worse for Hypo. Under the counterfactual scenarios, if Ixom builds a new Hypo plant in the NI, it could still be feasible for another party to build a new Hypo plant, should Ixom seek to raise prices above a competitive level. However, if anything, this seems less likely under the counterfactual than under the factual. This is because Ixom's new plant would likely have significant capacity, which Ixom would have an incentive to sell. For HCl and Caustic, the potential for new imports is the same under the factual and the counterfactual.

Competition from alternative products/services

- 20.24 Ixom also considers that chlorine, on-site Hypo generation and the use of UV will all impose meaningful competitive constraints in respect of the use of Hypo for water treatment as discussed in paragraph 19 above. In particular, in the water treatment industry:

20.24.1 Chlorine is the preferred water treatment chemical by water treatment authorities in Australia and is considered a better disinfectant than Hypo. Appendix 10 includes a summary of Ixom's customers that have switched from Hypo to chlorine (and vice versa) for water treatment purposes in Australia.

20.24.2 It is possible to substitute Hypo in water treatment uses with an on-site Hypo generator, which produces Hypo on-site for customers by combining salt, water and electricity. As discussed above [] use on site Hypo generation, and there are little or no barriers to other customers introducing the use of

¹⁸ Imports of Hypo for water treatment is currently difficult anyway because of the tendency of Hypo to break down and its concentration to drop over reasonably short periods of time.

such generators. On site Hypo generators vary in size and can be relatively low cost depending on a customer's requirements. Hypo generators can be brought as package plants from Global suppliers like Powell. Ixom considers this alternative operates as a significant constraint on Ixom's pricing of Hypo.

20.24.3 The use of UV in water treatment also operates as a partial constraint though does not completely eliminate the need for chemical treatment.

20.25 These constraints will be the same under the factual and the counterfactual.

Barriers to suppliers switching

20.26 [.]

HCl wholesale market

20.27 No aggregation of market share will occur in the wholesale markets as a result of the Proposed Acquisition, as Ixom does not import or manufacture HCl. Ixom does not consider that there are any horizontal merger issues in that market.

Caustic wholesale market

20.28 The Commission's concentration indicators are also difficult to apply to the wholesale Caustic market because Ixom is currently and, post-sale, will continue to be the only wholesaler of Caustic, even though the volumes sold at wholesale will increase (as a result of the volumes expected to be sold by Ixom to Oji from the Tasman Plant following the acquisition).

20.29 However, as a result of the Proposed Acquisition, Ixom will hold the only New Zealand manufacturing capacity for Caustic sold at wholesale and will also continue to be an importer and wholesaler. Ixom acknowledges that this could raise competition concerns in the wholesale market that need to be considered.

20.30 Ixom submits, however, that this does this would not lessen competition, for several reasons:

20.30.1 First, if the market is considered to include all imports, as well as volumes sold at wholesale, then the increase in Ixom's market share from the present is only around [] (approx. []). Compared to the counterfactual, Ixom's increase in market share will likely be the same, as [].

20.30.2 Second, as noted above, all of this increase in Ixom's volumes will be []. Ixom does not see its acquisition of the Tasman Caustic production as having an impact on the wider market. The rest of the Caustic market is served by imports and amounts to approximately [].

20.30.3 The same situation will also apply under the counterfactual.

20.30.4 Third, should Ixom ever seek to sell these volumes into the rest of the market, it would face strong competition from existing competitors. Ixom considers the ability of existing competitors to expand their imports, particularly Jasol, will place a significant constraint on Ixom following the acquisition under both the factual and the counterfactual. Jasol, the second largest importer of Caustic, has a very low stock turn in their Tauranga tanks. [].

- (a) Ixom does not see any major barriers to competitors expanding their quantities of imports or new importers of Caustic entering the markets. Caustic is available freely on the international market []; it can be imported in different containers, packages and volumes; []; the product is reasonably easily handled

and stored, with facilities available or that can be constructed; and third party logistics providers can transport material.

- (b) Ixom would also need to find new customers to take any additional volume, which it would need to win off other suppliers. Those other suppliers, however, have already proven adept at winning customers from Ixom, demonstrating their ability to compete.

20.31 The proposed acquisition will not increase the potential for coordinated behaviour in respect of Caustic, as Oji will not supply Caustic into the market under either the factual or the counterfactual.

21 Vertical merger issues

21.1 The Commission’s merger guidelines note that, in terms of conduct that prevents or hinders rivals from competing effectively, a vertical merger may substantially lessen competition where the merger increases the merged firm’s ability and incentive to prevent or hinder competition by:

21.1.1 refusing to deal with competitors completely (total foreclosure); or

21.1.2 raising prices it charges those competitors (partial foreclosure).

21.2 In the context of the Proposed Acquisition, these two issues could be expressed as Ixom post-acquisition:

21.2.1 refusing to provide product at wholesale to Ixom’s competitors so they cannot supply in the downstream markets; or

21.2.2 raising the wholesale price to its competitors to squeeze them out of the downstream markets on price.

21.3 Under the Commission’s merger guidelines, a firm is said to generally only have the ability to foreclose competitors if it has market power at one or more levels of the supply chain. If a firm does not have market power, its competitors could switch to other suppliers or purchasers, meaning that foreclosure would be unsuccessful.

21.4 In terms of incentives, a firm will weigh up the increase in profits it might get from higher sales in a downstream market against the decrease in profits it will suffer from foreclosure at the wholesale level.

21.5 This trade-off can be measured and is commonly called a “vertical arithmetic” calculation, and involves:

21.5.1 calculating the “critical diversion ratio”, which is the amount of diversion of customers in the downstream market needed to make foreclosure profitable, and;

21.5.2 the actual diversion ratio, which needs to be informed by information such as market shares, survey evidence, path switching behaviour, and econometric analysis.

21.6 In order to analyse the vertical merger issues raised by the Proposed Acquisition it is necessary to make some assumptions about production of Hypo, HCL and Caustic.

21.7 Ixom considers that the most likely production scenario, post transaction, from the Tasman plant will be:

21.7.1 []

21.7.2 []

21.7.3 []

21.8 Ixom's reasons for proposing these amounts are:

21.8.1 For Hypo (as discussed in paragraph 20.10 above):

- (a) The total market size, excluding Oji's own supply at Kinleith, of Hypo will be [];
- (b) Ixom will still supply into the SI market from its SI Hypo plant – an amount of approximately [].
- (c) Oji will continue to supply from Kinleith an amount of [] and Aakland's SI sales will be around [].
- (d) Ixom does []. Due to the chemical instability of Hypo, it will also likely not be possible to sell Hypo produced at Tasman into other export markets (as Hypo has a shelf life of up to 30 days).
- (e) This leaves Ixom with the ability to sell up to [] of Hypo from Tasman.

21.8.2 For HCl:

- (a) The total market size, excluding Oji's own supply at Kinleith, of HCl will be about [].
- (b) It seems likely (as with Hypo) that Oji would continue to supply [] ex-Kinleith of HCl into the market, and would price that product competitively with Ixom to ensure that it would be able to supply that amount.
- (c) Ixom thinks it reasonably likely that imports of 1,000Tpa would continue from other parties¹⁹.
- (d) [.]
- (e) If so, Ixom would seek to produce up to [] of HCl from Tasman.

21.8.3 For Caustic:

- (a) This amount of production of Hypo and HCl will allow Ixom to produce [] of Caustic at Tasman
- (b) 1,185Tpa of that Caustic will be used to produce Hypo, leaving [] for sale to Oji or third parties. [].
- (c) To meet its needs at Tasman (of approx. []), Oji will need to procure an additional [] from the market. [.]

21.9 Ixom has considered whether it would be able to sell more Hypo and HCl in the NZ market than under the above scenarios, supplying all of the market for those products. This, however, would require Ixom to displace sales by Oji (in relation to Hypo and HCl), Aakland (in relation to Hypo), and other importers (in relation to HCl). Ixom does not think that this would be possible, for the following reasons:

21.9.1 As discussed above, Ixom expects that Oji will price product from Kinleith competitively with Ixom's product from Tasman.

¹⁹ We understand that while HCl in bulk at [] container sizes wanted by customers, []

[]. We understand that the cost of packaging bulk HCL into [].

- 21.9.2 Auckland prices Hypo for industrial purposes at a very competitive price, demonstrated by the fact that it supplies all demand for this segment in the SI.²⁰ However, given that Ixom does not supply any of that segment, and Ixom is able to operate its Timaru Hypo plant only at [] Ixom does not expect it will []. [].
- 21.9.3 Ixom expects that the retail cost of HCl produced at Tasman will remain slightly higher than the retail cost of HCl imports, due to the need to transfer HCl to smaller packages, and re-package it. []. In comparison, the retail cost of HCl imports is lower and sold at a price Ixom cannot and does not compete with. If it were possible for HCl from Tasman to displace HCl imports, Ixom would expect Oji to have done so already, but this has not occurred.
- 21.10 As noted above in paragraph 21.8.2(d) a possibility, although currently uncertain, is that Ixom is able to sell some HCl at export. This would not have any impact on the NZ market supply of Hypo or HCl, but would enable Ixom to produce more Caustic, potentially up to the full capacity of the Tasman plant. If this occurred, then up to [] of Caustic could potentially be available for sale to Oji and third parties ([]). This Caustic would, however, be 20% strength which would require Ixom to find a taker for this low strength Caustic (which, as discussed, is in low demand). Alternatively, Ixom could invest in the capital required to dry the Caustic to 46% strength (which is in higher demand), however Ixom has not calculated the capital required to pursue this option at this time. We have nevertheless considered the implications of this scenario below.

Application to the wholesale Hypo market

- 21.11 Ixom does not consider that the Proposed Acquisition would give Ixom the ability and incentive to foreclose competitors from the wholesale Hypo market.
- 21.12 Post-transaction the most likely scenario is that Ixom will produce approximately [] of Hypo from the Tasman Plant and its South Island Hypo plant or [] of the wholesale market.
- 21.13 Ixom acknowledges that, post-transaction:
- 21.13.1 If Ixom's supplier market share is currently approximately [] (see Appendix 8), there will be insufficient volume from the Kinleith Plant to meet the needs of all other suppliers on the basis of Kinleith's present output figures. Some of those other suppliers (approximately [] of supply) will need to seek wholesale supply from Ixom at Tasman or elsewhere, if they are to continue to supply their existing customers.
- 21.13.2 Theoretically, this could give Ixom the ability to foreclose at least some competitors from the Hypo supplier market.
- 21.14 However, as discussed at paragraph 11.11, Kinleith has latent capacity. If Ixom tried to foreclose competitors, Oji could increase production of Hypo at the Kinleith Plant at little additional cost to Oji and/or shift chlorine supplied to Ixom into instead the production of Hypo and HCl. Ixom estimates Oji could produce at least an additional [] of Hypo at Kinleith. This means all of the market demand other than from Ixom could be met by Oji at Kinleith.
- 21.15 In addition, Ixom will be constrained by the following:
- 21.15.1 Given the mature nature of the market, structural over supply and high fixed costs of the Tasman Plant:

²⁰ Import statistics show the South Island import price for HCl is \$690 per tonne in IBCs.

- (a) If Ixom were to foreclose, it would risk reducing the demand for product from the plant;
- (b) Ixom would not be able to reduce fixed costs and given the high fixed costs nature of chemical manufacturing plants in general (and chloro alkali plants specifically), the lost volumes would have a materially adverse impact on the overall profitability of the plant;
- (c) Ixom will have a strong disincentive to foreclose competitors in the downstream market as any attempt at foreclosure means Ixom would risk not being able to cover those fixed costs or alternately Ixom would materially erode its margins that it would generate from the Tasman Plant after having covered those fixed costs;
- (d) This is relevant in each downstream market (including HCl and Caustic).

21.15.2 The potential for a competing supplier to build its own Hypo plant in New Zealand, as discussed above in paragraph 20.19, if Ixom sought to foreclose, at the wholesale level, any of its downstream competitors. The potential for a new Hypo plant is especially important in respect of supply to downstream customers in the water treatment industry, who utilise higher concentrations of Hypo (although Hypo produced at such a plant can also be sold into other uses and diluted).

21.15.3 The potential for new imports of Hypo into the NI, either from Auckland or other parties, for industrial, agricultural and lower concentration uses, see paragraph 20.21 above.

21.15.4 The potential for water treatment customers to use chlorine, UV and on-site Hypo generation as an alternative to Hypo as discussed in paragraph 20.24

21.15.5 Ixom obtains [] of chlorine from Oji at Kinleith, which it uses to manufacture Hypo and HCl. [].²¹ Accordingly, if Ixom were to increase the price of Hypo (or HCl), then Oji will be able to increase the price of chlorine or convert the chlorine into the derivative products to capture the margin.

21.16 As a result, Ixom does not have the ability to foreclose competitors from the wholesale market.

21.17 An important issue, in terms of these constraints, is whether there are any barriers to customers switching between suppliers or technologies. On the basis of the information set out at paragraphs 14 and 15 above Ixom does not consider that there any significant barriers. In particular there are few limitations against customers switching suppliers from Ixom. Where Ixom does have exclusivity, [].

21.18 In terms of customer equipment, whilst some special customer equipment (e.g. tanks, pumps, pipelines) is required to store, handle or use the subject products, that equipment is not specific to the products of any specific supplier. Most equipment is owned by customers, except that:

21.18.1 Some formulated caustic for cleaning is sold by Ixom to customers in commercial packages, which includes dosing equipment, however those customers would represent less than [] of the Caustic market. Typically the customers have buy out clauses to purchase the equipment outright and other suppliers are able to supply the same or similar equipment.

21.18.2 Ixom has some smaller volume Caustic customers where it owns tanks at those sites and has contracted supply []. These tanks on customers' sites could be

²¹ [

].

replaced for ~\$50-100k per tank. These customers represent [.]

21.19 As noted above in paragraph 19.37.2, there are a number of examples of customers switching suppliers. Ixom suspects the reason for each customer switch is due to pricing. [] regularly switches supplier depending on price. Numerous community pools regularly switch between competing suppliers on the basis of price and services.

21.20 In addition, Ixom does not consider that it would have an incentive to foreclose competitors. Ixom commissioned NERA to undertake a vertical arithmetic calculation of whether Ixom would have such an incentive post-acquisition. NERA concluded that:

21.20.1 For both Hypo (and HCl), the margins earned at the upstream level are large relative to those at the downstream level. As a result, Ixom stands to lose a large upstream margin from foreclosure, but gains (relatively) less in downstream margins. This makes the threshold (the critical diversion ratio) at which foreclosure is profitable relatively high; and

21.20.2 At the same time, the actual diversion is not sufficient to overcome this threshold regardless of whether the foreclosure was targeted at particular competitors or competitors in aggregate. This is because customers have sufficient alternatives to Ixom's downstream business. If, for example, Jasol's Hypo purchases are foreclosed by Ixom, Jasol's customers could switch to Aakland (where Hypo is used for other Hypo uses), or (where Hypo is used for potable water treatment) they could switch "outside the market" by using alternatives such as chlorine, on-site Hypo generation, or UV treatment. Moreover, Jasol itself could bypass the Tasman chemicals plant altogether, and source its chemical inputs from Oji's Kinleith plant.

21.21 A copy of NERA's report is attached in Appendix 11 and Ixom is able to supply the Commission with supporting information.

21.22 Ixom therefore submits that the Proposed Acquisition would not give Ixom the ability and incentive to foreclose competitors in the Hypo market, due to the constraints arising from Oji's Kinleith production, the risk of a new Hypo plant being built, Aakland's imports in the SI for use for agricultural cleaning and disinfection (and the ability for a competitor to import Hypo to the North Island for the same uses), and alternatives to Hypo for water treatment.

21.23 In addition, in the counterfactual Ixom's supplier market share will also be around [] but less Hypo would be available from Oji's Kinleith plant, as Oji will need to source some additional Hypo from the Kinleith Plant to use in its Tasman Mill, due to the closure of the Tasman Plant under the counterfactual. This gives Ixom potentially greater ability to foreclose competitors under the counterfactual than under the Proposed Acquisition (although, under the counterfactual, the same constraints as discussed above will apply). This raises the likelihood that the Proposed Acquisition will lead to a better competitive outcome than the counterfactual.

Application to the wholesale HCl market

21.24 Ixom has also considered whether the Proposed Acquisition could give Ixom the ability and incentive to foreclose competitors from the wholesale HCL market, with a downstream effect on the supplier market. Ixom does not consider it would have the ability to do so because:

21.24.1 As noted at paragraph 21.15 in respect of the Hypo market above, the high operating and fixed costs at the Tasman Plant means Ixom will have a strong disincentive to foreclose competitors in each downstream market as any attempt at foreclosure means Ixom would risk not being able to cover those fixed costs.

21.24.2 The most likely supply scenario is that Ixom will produce approximately [] of HCl or [] of the wholesale market.

- 21.24.3 In total, imports, combined with Oji's supply available from Kinleith, will be around [], or [] of the market.
- 21.24.4 Given that Ixom currently has around [] of the supplier market, this leaves [] that might need to seek supply from Ixom (assuming Ixom switches all its own demands for HCl to Tasman). This is insufficient to permit Ixom to foreclose in any meaningful way.
- 21.25 Further, as noted above, Oji could increase production from Kinleith or switch supply of chlorine to Ixom to production of Hypo and/or HCl, meaning it would be able to meet all non-Ixom demand in the market. Ixom would also be constrained by imports, as follows:
- 21.25.1 A number of competitors currently import HCl into New Zealand (Redox, Consolidated Chemicals, Clarks) and, given their presence in the market, could seek to expand their volumes on the basis of their current customer base. Currently, approximately 1,000 Tpa of HCl is imported which acts as a competitive constraint on the pricing of locally manufactured HCl.
- 21.25.2 A new importer (or a party such as Jasol, which currently supplies HCl sourced from Oji) could establish an import chain and compete with Ixom's production from Tasman, at reasonable cost. The [] supports this (see Appendix 6)²².
- 21.25.3 HCl is readily available in many countries in North and South Asia at a very low cost (given manufacturers need a channel to dump as much HCl as possible in order to enable the production of more Caustic).
- 21.25.4 Ixom's larger customers [] have the volume to viably set up their own import circuit from Asia, or sponsor the entry of another competitor to do so.
- 21.26 The only supply chain constraints existing importers face in expanding their imports is compliant storage for their volumes, as any person storing HCl in quantities greater than 60 tonnes at a single location requires an MHF license. Ixom believes that there are third party logistics providers that could provide that service or alternatively could store HCl at more than one location in order to fall below the 60 tonne threshold.
- 21.27 The competitive constraints above will be the same or even less under the counterfactual as opposed to the factual situation. The counterfactual may be a less competitive situation, because Oji will need to take some HCl from Kinleith for its Tasman mill under the Counterfactual which it won't need to do under the Proposed Acquisition, where it can continue to obtain HCl from the Tasman Plant. This means that supply to the rest of the market from the Kinleith plant will be less of a constraint on Ixom's actions than under the factual, which increases the potential likelihood that Ixom would be able to foreclose under the counterfactual.
- 21.28 In addition, Ixom does not consider that it would have the incentive to foreclose – see the summary of the NERA report in paragraph 21.20 above.

Application to the wholesale Caustic market

- 21.29 Ixom does not consider that the acquisition will give rise to any horizontal merger issues in the wholesale Caustic market.
- 21.30 The amount of Caustic available at Tasman for sale (approx. []) will likely make up only [] of the total New Zealand domestic demand.

²² [] identifies risks of disruption of supply for imports. This is a short-term risk, and would usually be dealt with by stockpiling. Ixom does not consider that the cost of stockpiling would affect the ability of imports to compete with local manufacture.

- 21.31 []. It is theoretically possible that some or all of this Caustic could become available to other retailers, but that volume of Caustic is only a small percentage of the market and there are very few customers in New Zealand who use Caustic at a 20% strength level.
- 21.32 Ixom would not have the ability to foreclose other competitors, because those competitors largely import product in their own right which is typically a higher strength grade of Caustic in line with the strength that most customers use. Accordingly Ixom and its competitors do not buy any Caustic at present from the Tasman chemicals plant. In addition, Ixom will need to cover the fixed costs of the Tasman Plant, as discussed at paragraph 21.15, which acts as a strong disincentive to foreclosing competitors.
- 21.33 []
- 21.34 Ixom believes Jasol has a very low stock turn in its Tauranga tanks so would have the capacity to expand its current output by 3 to 4 times if required or considered commercially viable.
- 21.35 Oji has itself imported bulk Caustic in the past (i.e. and not obtained it directly from Ixom) and is likely to revert to that in the event that Ixom sought to increase the price of Caustic (which Ixom anticipates will be constrained in any event under Ixom's supply contract with Oji). Oji could also team up with other large Caustic users in New Zealand and jointly import Caustic.
- 21.36 The cost of Caustic produced from the Tasman plant is likely to be comparable to the cost of imports (see paragraph 20.30.4 above).
- 21.37 If (subject to finding buyers other than Oji who are willing to accept low strength Caustic) up to [] of Caustic could be made available for sale from the Tasman plant (see paragraph 21.10 above) that would not change the situation as far as the foreclosure analysis is concerned.
- 21.38 The position under the acquisition is unlikely to be materially any different under the counterfactual.

22 Glossary of defined terms

22.1 **Caustic** means Caustic soda, also known as sodium hydroxide which is an inorganic compound with the formula NaOH;

HCl means Hydrochloric acid which is a colourless inorganic chemical system with the formula H₂O: HCl;

Hypo means Sodium Hypochlorite which is a chemical compound with the formula NaOCl or NaClO;

Ixom means Ixom Operations Pty Limited (Company Number: 5488365);

Kinleith Plant means the chemical plant located at Kinleith which currently produces Hypo, HCl, Caustic, chlorine dioxide and liquid chlorine;

MHF Regulations means the Health and Safety at Work (Major Hazard Facilities) Regulations 2016;

Oji means the Oji Fibre Solutions (NZ) Limited (Company Number: 1308173);

PAC means poly aluminium chloride, which is primarily used for coagulation in water treatment and paper making;

Subject products means each of the products relevant to this application, namely Hypo, HCl and Caustic;

Tasman Plant means the chloro alkali plant and integrated dioxide plant assets located at Fletcher Avenue in Kawerau (including chlorine and derivative product manufacturing assets, plant spares, tanks and associated equipment) belonging to Oji.

Part 6: Further Information and Supporting Documentation

- 23 **Copies of the most recent audited financial statements for each of the merger parties**
- 23.1 Copies of the most recent audited financial statements for Ixom's NZ business and for the group accounts for Oji Oceania Management (NZ) Limited, of which the Vendor is part, are attached to this application as confidential Appendices 12 and 13 respectively.

Part 7: Confidentiality

- 24 **Confidentiality for specific information contained in or attached to the notice**
- 24.1 Confidentiality is sought in respect of the information in this application that is highlighted in **yellow** and contained in square brackets and for all of Appendices 2, 3, 5, 6, 10, 11, 12 and 13. Confidentiality is sought for the purposes of section 9(2)(b) of the Official Information Act 1982 on the grounds that:
- (a) the information is commercially sensitive and contains valuable information which is confidential to Ixom (and/or the Vendors); and
 - (b) disclosure would be likely unreasonably to prejudice the commercial position of Ixom (and/or the Vendors), as the parties providing the information.
- 24.2 Ixom also requests it is notified of any request made to the Commerce Commission under the Official Information Act 1982 for the confidential information, and that the Commission seeks Ixom's views as to whether the information remains confidential and commercially sensitive at the time those requests are being considered.

The foregoing applies equally in respect of any additional information provided to the Commission that is expressed to be confidential.

DECLARATION

THIS NOTICE is given by **Ixom Operations Pty Limited (Ixom)**.

Ixom hereby confirms that:

- all information specified by the Commission has been supplied;
- if information has not been supplied by Ixom, reasons have been included as to why the information has not been supplied;
- all information known to Ixom which is relevant to the consideration of this application/notice has been supplied; and
- all information supplied by Ixom is correct as at the date of this application/notice.

Ixom undertakes to advise the Commission immediately of any material change in circumstances relating to the application/notice.

Dated this 19th day of December 2018.

Sean Eccles

I am the General Manager of the Ixom New Zealand chemicals business and a director of Ixom. I am duly authorised to make this Application/Notice.

Appendix 1: Company Extract

Page 1 of 2



Company Extract

IXOM OPERATIONS PTY LTD

5488365

NZBN: 9429041465226

Entity Type:	Overseas ASIC Company
Registered:	21 Oct 2014
Current Status:	Registered
Constitution Filed:	No
Annual Return Filing Month:	May
FRA Reporting Month:	September
Country of Origin:	Australia
Australian Company Number (ACN):	600546512

Company Addresses

Principal Place of Business in NZ

166 Totara Street, Mount Maunganui South, 3116, NZ

Address of Person Authorised to Accept Service in NZ

ROWE, Colinda

C/- Ixom, 166 Totara Street, Mount Maunganui South, 3116, NZ

Directors

This overseas company is part of the data exchange between the New Zealand Companies Office and ASIC (Australian Securities & Investments Commission). As of 1 September 2007 all director details and constitution documents will be filed by ASIC.

DRAPER, Dean Trevor

23 Jacka Street, Balwyn North, Vic, 3104, AU

ECCLES, Sean Robert

8 Estelle Place, Farm Cove, Auckland, 2012, NZ

MARTIN, Todd Francis

145 Diggings Road, Willowmavin, Vic, 3764, AU

RASDELL, Stephen Glen

56 Gladstone Street, Kew, Vic, 3101, AU

WOLFE, Bryce Daniel

18 Robinson Street, Malvern, Vic, 3144, AU



Company Extract
IXOM OPERATIONS PTY LTD
5488365
NZBN: 9429041465226

For further details relating to this company, check <http://app.companiesoffice.govt.nz/co/5488365>
Extract generated 18 December 2018 06:03 PM NZDT

Appendix 2: Oji Board minutes or other evidence showing intention to close Tasman Plant
[CONFIDENTIAL]

Appendix 3: Terms sheet and draft Agreement for Sale and Purchase

[CONFIDENTIAL]

Appendix 4: Description of the chlor alkali plant processes

The Chloralkali Plant produces Chlorine and Caustic using water, salt and electricity. Hydrogen is a by-product. The Chloralkali plant consists of 3 main process areas:

- Brine Treatment
- Brine Electrolysis
- Product Handling

Brine is treated to remove impurities which effect the performance of the electrolysis process. Brine is prepared, filtered and finally purified in ion exchange columns.

Brine electrolysis is the passing of an electric current through a salt solution. The products of brine electrolysis are Caustic (sodium hydroxide), chlorine and hydrogen. Electrolysis takes place in a single ML32 Electrolyser from Asahi Kasei. Part of the Caustic is recycled to the electrolysis area. Some of the unreacted brine is de-chlorinated and returned to the brine treatment area.

Most of the Caustic that leaves the electrolysis area goes to storage tanks for use in the Mill. The remainder of the Caustic is used internally for brine treatment and water treatment.

The chlorine is demisted, cooled, filtered, dried and either used to produce hydrochloric acid or it is compressed, liquefied and stored before it is re-vaporised for Hypo production.

The hydrogen is demisted and then used for HCl production or vented.

The Chloralkali process represent in the figure below:

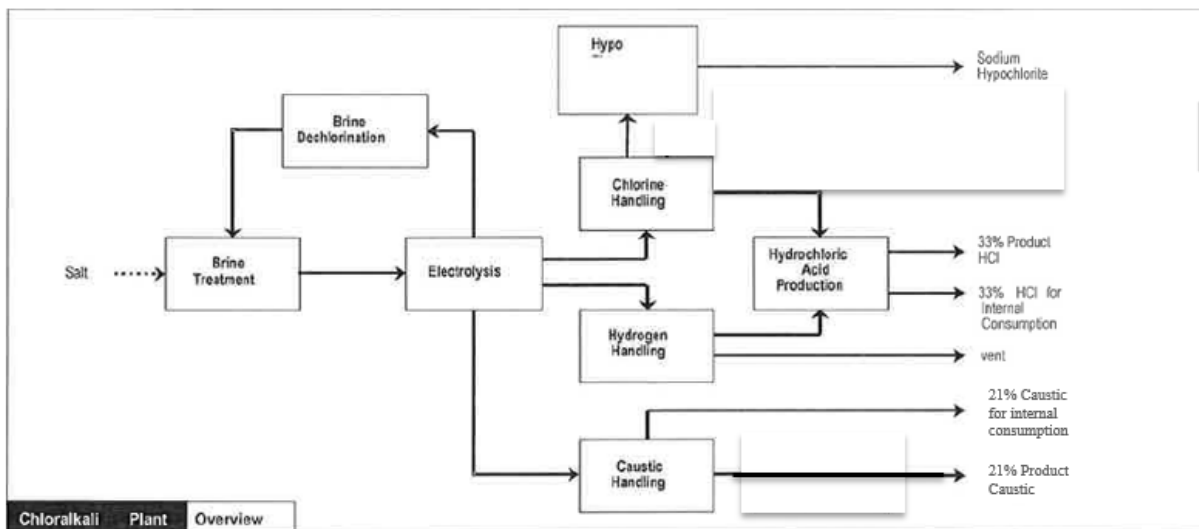


Figure x. Chloralkali Plant Overview

HCl is produced in the HCl synthesis unit by the combustion of hydrogen and chlorine gases to form hydrogen chloride gas, which is cooled and absorbed in demineralised water to produce approximately 33% HCl solution by weight. HCl is dosed into the brine circuit to control the pH, therefore the HCl is produced with demineralised water to prevent hardness and other impurities from entering the electrolysis.

The HCl drains from the HCl synthesis unit to the HCl pump tank and is then pumped by the HCl transfer pump to the HCl head tank. The head tank distributes HCl to all the gravity fed users in the Chloralkali plant and the excess overflows to the HCl storage tank. HCl can then be dispatched to tankers using the HCl Transfer Pump.

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The vent gas leaving the synthesis unit contains HCl which is removed in the tail gas scrubber to low residual levels. The scrubber tail gas which contains mainly hydrogen and water vapour passes through the HCl vent scrubber and is then vented to atmosphere.

Hypo is produced by directly injecting chlorine gas into a dilute caustic solution from the Hypo tower system. The product is cooled to remove heat from the reaction and then transferred to storage from where it can be dispatched to tankers using the Hypo Transfer Pump.

The plants are served by a chlorine gas scrubbing system that ensures that all vent gasses containing chlorine are treated by scrubbing with dilute caustic solution before they are discharged to atmosphere.

All of the purchasers of Hypo and HCl from the Tasman chlor alkali plant are distributors who resell these products to end users in New Zealand, with Ixom purchasing approximately [] of the output of those two products from that plant.

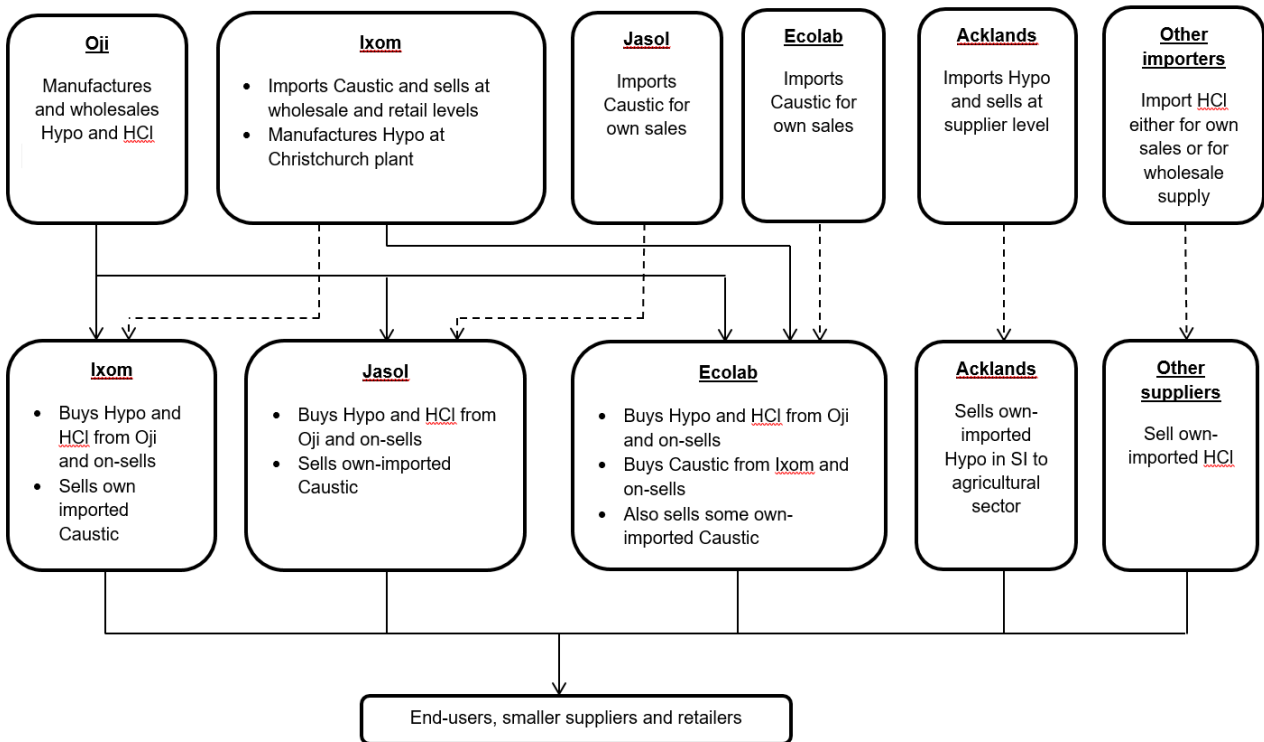
Appendix 5: Principal customers and volumes for the subject products

[

]

Appendix 6: []
[CONFIDENTIAL]

Appendix 7: Diagram of market levels



Appendix 8: Market share information

Wholesale/importer market share information

- 1 At present, the market shares of wholesale suppliers and importers in the wholesale import market are approximately:

Wholesale supplier/importer	Hypo Total market []	HCl Total market []	Caustic Total market []
Oji (Tasman and Kinleith plants)	[] []	[] []	
Ixom	[] []		[] []
Aaklands (imported)	[] []		
Jasol (imports)			[] []
Other importers	Nil	[] []	[] []

- 2 For the purposes of the table above, Ixom has counted all imports and New Zealand production as potentially available for wholesale supply.

Market shares of Suppliers

- 3 Ixom competes with a number of parties in the supply of the subject chemicals to smaller distributors, retailers and end-users, which we have called the supplier market. These competitors include Jasol, Aaklands and Ecolab. Ixom has estimated the market shares in these markets as follows:

Ixom estimated supplier market shares (approximately)				
Product	Total market volume (excluding Oji own supply)	Ixom volume	Ixom percentage market share	Other parties
Hypo	[]	[]	[]	Jasol: [] or []
	[]	[]	[]	Aaklands: [] or []

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	[]	[]	[] [] []	Other parties: [] or [.] Ixom does not consider that any other party has more than 5% Water treatment: [] Other uses: []
HCl	[]	[]	[]	Jasol: [] or [] Other parties: [] or [] Redox: [] Ixom does not consider that any other party has more than [].
Caustic	[]	[] ²³	[]	Ecolab: [] or [] Jasol [] or [] Other: [] or []

²³ This amount is less than the amount of Ixom's imports as Ixom supplies approximately [] of Caustic to Ecolab, which Ecolab then on-sells in competition with Ixom.

Appendix 9: Expected market demand post the Proposed Acquisition

- 1 The market demand for Hypo and HCl post-acquisition, excluding product taken directly by Oji from its Kinleith plant, is expected to be:

Product	NZ market demand post-acquisition (approximately)
Hypo	<p>[]</p> <p>Comprising [] currently supplied ex- Tasman plant plus [] of continuing Oji demand ex-Tasman purchased from Ixom, [] currently supplied by Oji ex-Kinleith, Ixom SI plant sales [], Aaklands []</p>
HCl	<p>[]</p> <p>Comprising [] ex-Tasman and continuing Oji demand ex-Tasman [] supplied by Oji ex-Kinleith, []</p>

- 1.1 The total supplier market demand for Hypo and HCl will increase above the current total wholesale market demand as Oji will move from self-supplying to [].
- 1.2 The current total New Zealand consumption of Caustic is expected to remain unchanged. Oji will, however, [] in the market demand for Caustic post transaction, but excluded product taken by Oji directly from its Kinleith plant. This gives a total NZ market demand for Caustic post-acquisition of [].

Appendix 11: NERA Report

[CONFIDENTIAL]

Appendix 12: Ixom Annual Report

[CONFIDENTIAL]

Appendix 13: Oji Oceania Management (NZ) Limited Annual Report

[CONFIDENTIAL]