**SUBMISSION TO PRODUCTIVITY COMMISSION**
Tasmanian Freight Equalisation Scheme

## Background

### The Company

Circular Head Dolomite and Trading Company (CHD) mine dolomite rock at Smithton, in far Northwest Tasmania. The company mines approximately 70,000 tonnes per annum, but has the capacity to lift this to in excess of 100,000 tonnes per annum. The dolomite rock is then crushed to various sizes and used for a number of applications. A breakdown of the applications tonnage's and percentage of total business is outlined in Table 1 below.

**Table 1: Amount and end uses of dolomite rock mined by CHD**

| ***Application*** | **Tonnes pa** | **% of total** |
|---|---|---|
| Agricultural powder | 37,106 | 54 |
| Smelting | 0 | 0 |
| Cement | 8,447 | 12 |
| Aggregate (roads) | 23,403 | 34 |
| Feed additive | 0 | 0 |

### The resource

There are limited deposits of dolomite in the state and Australia for that matter. CHD has the most significant, both in terms of quality and quantity. The deposit is at least 1km deep and covers an area of 210 $km^2$ (7.5km x 30km), a massive resource which is the largest in the southern hemisphere and one that could last many hundreds of years.

### Uses for dolomite

The dolomite mineral (a combination of calcium and magnesium)is a very versatile resource that has a number of uses. The most significant in Tasmania is as a soil conditioner. Dolomite is applied to soil to increase pH, (or decrease the acidity) and to improve the magnesium content.

Soil pH is naturally acidic on most soils in Tasmania. The high rainfall and agricultural practices employed (such as irrigation and cultivation) mean that acidification (or the leaching of calcium and magnesium) is a natural and on-going occurrence. Because of this there will always be strong, if not increasing local demand from agricultural industries for liming products.

Soil acidification can also be improved in a similar way by the use of agricultural lime. Agricultural lime does not contain significant amounts of Magnesium and so is of little or no benefit in improving soils Magnesium status.

Calcium plays an important role in bone structure in animals, and cells structure in plants, while magnesium is essential for the production of Chlorophyll. Chlorophyll enables plants to convert sunlight into carbohydrates (energy) which can then be consumed by animals. Magnesium is often limiting from an animal nutrition perspective and applying dolomite

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increases the amount of available Magnesium in the soil and hence plants can take it up in luxury amounts, which in turn contributes to improved animal health.

Higher concentrations of Magnesium in the plant contribute to improved animal health. The main health issue in stock is associated with a lack of magnesium, hypomagnesaemia (or grass tetany). Grass tetany affects the nervous system of animals and is essential in lactating animals.

A far bigger animal health problem than grass tetany is milk fever (hypocalcaemia). Magnesium plays an important in calcium mobilisation, which is essential in reducing the impact of milk fever. Table 2 highlights the enterprises relying on dolomite as an input into their businesses.

**Table 2: Dolomite powder sales by enterprise**

| | Sales x Commodity within Tasmania | | | | |
|---|---|---|---|---|---|
| Year | Total annual sales | Dairy | Beef | Cropping | Other |
| 2000/01 | 37,567 | 31% | 24% | 42% | 3% |
| 2001/02 | 39,716 | 33% | 24% | 40% | 3% |
| 2002/03 | 28,811 | 18% | 26% | 52% | 5% |
| 2003/04 | 30,087 | 22% | 29% | 46% | 4% |
| 2004/05 | 37,106 | 22% | 29% | 46% | 4% |
| **Average 5 yrs** | | **25%** | **26%** | **45%** | **4%** |

As can be seen (Table 2) the use of dolomite is widespread across a range of industries, and an even greater range of enterprises. The current downturn in the cropping industries, particularly potatoes and poppies will have a dramatic impact on the demand for dolomite in the short to medium term. As an example one poppy company has reduced its planting area by 4,500 ha (or nearly 90%).

In addition to this another significant impact on the local demand for dolomite has been the amount of land converted from agricultural uses to forestry. Sources estimate this to have been in the order of 45-60,000 hectares in the last three years. The rate of planting in the next 3 years is estimated at 10-20,000 hectares per annum.

**Employment**

CHD employs 15 staff directly, but has a much wider flow on benefits to the local economy. With an annual turnover in the order of $3-$4m and costs of $2-$3m it is a significant contributor to the local and state economy.

In addition to direct employees the dependent employment position includes the building industry, fertiliser spreaders, road construction and the farming sector.

**Business expansion**

Business expansion in Tasmania is limited. There is limited ability to increase market share, and the size of the market is contracting due to factors such as forestry, which have lower requirements for dolomite.

In order to expand the business must export its product. In order to export the product and be competitive on the mainland the full subsidy amount is required.

**Issues specific to the Tasmanian Freight equalisation scheme**

**High Density products**

Under the current rules of the TFES dolomite powder is classed as a High-Density product and receives only 60% of the subsidy of Low-Density products. The justifications given for the reduction in subsidy level, while theoretically logical, do not exist to the same extent in reality.

1. Dolomite is a low price, low margin bulk commodity. There is little if any ability to pass the additional freight costs associated with the product being classed as High Density, on to the consumer. Similar products exist on the mainland and the lack of a quality assurance system means that inferior products are more competitive.

   Other high-density products (eg custards) are higher value, have a higher margin and as a result the impact of the High-Density rating has a reduced impact. In addition to this, some high-density products can still fill containers and reduce marginal or unit costs.

   Low-density products are often high value, like for example breakfast cereals. An example of two such products (see document A) revealed that the average value of the product in the container was $37,500. In order to make up the transport cost only a few cents per packet need to be added to the price or taken from the margin. The average subsidy was $96.25/tonne

2. CHD has invested considerable time and effort (see Document B commercial-in-confidence – Bulk Shipping in Bass Straight) in trying to develop options for shipping the product in bulk. The nature of the product is such that it can not be loaded and unloaded by conventional means for similar products. Of particular note is the difference between dolomite and fertiliser. Dolomite has higher water content which means that it “bridges” and does not flow from a hopper like fertiliser and as a result fertiliser ships can not be used.

3. The rail system in Tasmania does not extend as far as Smithton and as a result there is no ability to lower the average cost of transportation using this option. In addition to this the cost of transporting the product using B-Doubles proves to be more expensive than using a singe reefer effort (see Document C commercial-in-confidence – Quote from Toll Shipping).

4. CHD could ship unrefined dolomite rock in containers and receive the full Low-Density rate. The rock could then be crushed offshore. This goes against the fundamental philosophy of the TFES to encourage value adding of products in Tasmania. In addition to this CHD wishes to neither engage in practices of undermining the current scheme or retrenching part of its workforce. (See Document D - Premium vs Pit run products)

5. The cost of transport in Victoria for a similar (420 km) road trip is higher than the subsidy proposed under the scheme if the product only receives the High-Density rate. Because the product can be broadly described as a commodity (low per unit value) the difference in subsidy between the Low and High-density amounts to only $10/tonne. The impact on landed product sale price is however in the order of 20%, and is the difference between a viable and non-viable export operation (see Document E commercial-in-confidence – Quote from Victorian Transport Company).

**Summary**
The CHD wishes to expand its business into mainland markets and is currently restricted from doing so by an anomaly of the current TFES, that being the differentiation between High and Low-Density freight. This anomaly of the scheme does not reflect the real transportation environment that the company finds itself in.

The options that are available to CHD under the current TFES are such that in order to obtain the Low-Density subsidy it requires to be competitive on the mainland, it is forced to act in a way that compromises the TFES objectives. CHD is interested in value adding its product locally and does not wish to send rock to Victoria to be crushed at the expense of local jobs.