

# Competition for Waste Services - Overview

Prepared for

**Transpacific Industries Group (NZ) Ltd**

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# Executive Summary

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The purpose of this report is to assess the competitive implications of a set of applications to the Commerce Commission by Transpacific Industries Group (NZ) Ltd (TPI) for clearance to acquire businesses in the South Island. The specific applications to which this document refers are allocated file numbers 760, 761, 768 and 769 on the Commission's website.

This report draws on two earlier papers prepared for TPI which subsequently have been provided to the Commission. One of those investigated sustainable market structures for collection services.<sup>1</sup> The other was focused on the demand side of the collection markets and studied the extent of substitutability between different collection services.<sup>2</sup> The intention with the present paper is to take a broader view of the transactions. With this remit we can consider all of the facts surrounding the transactions, select the most important ones, explain why they are important and what can be inferred from them, and eventually arrive at a well-founded conclusion about the impact on competition.

## Market Definition

The market definitions adopted by the Commission appear to deliberately err towards being narrow rather than broad. This is not necessarily problematic in itself, since the impact of adjacent services can be accommodated during the competitive assessment that follows market definition. With that opportunity in mind, two main observations arise.

The first concerns the "national multi-site market" defined by the Commission. There is no dispute over the existence of an economically distinct body of demand from the customers the Commission includes in this market. Similarly, it is agreed that these customers have sufficient bargaining power to extract material discounts from suppliers. However it seems more appropriate and informative to identify this as a customer-specific market rather than a product-specific market. There are two reasons.

- Several of the products included in this market are functionally distinct from waste collection, ie they are able to be separately monopolised in their own right.
- While the demand at issue is often spread over distinct geographic markets, it need not be. The key economic features are simply that buyers have relatively large volumes from several sites, seek more than just collection services, and enjoy a degree of bargaining power.

The second observation arises from the information presented below, which shows that a substantial fraction [CONFIDENTIAL ] of TPI's FEL customers are not on scheduled collection timetables. For this demand, when prices are similar, gantry

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<sup>1</sup> Competition for Scheduled Waste Services – Sustainable Market Structure, Covec Report for TPI

<sup>2</sup> Competition for Scheduled Waste Services – Substitutability, Covec Report for TPI

services are a relatively close substitute from both demand and supply sides of the market.

When combined with previously submitted information on the relative prices of wheelie bin, FEL and gantry service, this suggests that it may be more appropriate to define collection markets from the demand side than the supply side. Under this interpretation, there are markets for scheduled services (provided by wheelie bin and FEL operators) and for unscheduled services (provided by FEL and gantry/huka operators).

## **Competition Assessment**

The proposed transactions raise no issues over co-ordinated market power, or over the potential for vertical restraints. Attention is therefore focussed on horizontal aggregation in collection markets, particularly for demand that prefers a scheduled service, and on the implications of this aggregation for the multi-site customer market.

### **Scheduled Collection Services**

There are economies of scale in scheduled collection services from wheelie bins, FEL bins and gantry bins. They arise from the fixed costs of collection equipment being spread over increasingly large volumes, and (for wheelie bins and FEL) from the use of trucks that can collect and compact waste from many sources before unloading at a transfer station or landfill. The latter effect cuts the running costs per collection, which improves route density. As one's business grows, both of these effects lead to reductions in the average running cost associated with each collection. In all relevant scheduled collection markets, two or more large operators have enjoyed scale economies for many years. A fringe of smaller operators is also frequently in evidence.

Over similar timeframes, prices have remained broadly in line with the costs of the smaller firms that have not secured scale economies. While such firms exist in most markets, they would not survive if their larger rivals cut prices to the degree that they could. They are being accommodated, rather than attacked. This situation has not changed for many years. It is a stable and profitable equilibrium that, in all probability, will continue in the counterfactual scenario.

If the transactions proceed (the factual scenario), one of the large operators will be subsumed into TPI, which in many cases will become the only major waste collector. It will have a choice between two strategies. One option is to aggressively seek to drive out the smaller operators; the other is to maintain existing pricing strategies, which accommodate these small operators.

Accommodation of small scale firms is considerably more attractive than trying to drive them from the market. There are two reasons.

- First, entry is reasonably easy, even though expansion may be more difficult. Small scale entry does not threaten the profitability of larger firms, whether they

control all or only half of the balance of the market, so accommodation of small scale entry remains an attractive strategy in the factual.

- Second, a more aggressive strategy, in which small firms are driven from the market (without predation), is risky for two reasons. First, it requires investment in a reputation for aggression, and that investment will only be worthwhile if the desired reputation is perceived by most of the potential entrants. Second, success results in higher prices, which are more likely to attract a sophisticated large scale entrant.

By far the most likely factual scenario is therefore that TPI's pricing behaviour will not change. Entry will remain feasible for small operators, and expansion will continue to be a challenge. Prices, which are a critical indicator of competitive intensity, will remain around the same level.

In the factual scenario, there is a small probability that the transaction will provoke large scale entry by a sophisticated and experienced operator. This seems extremely unlikely to occur in the counterfactual. Entry of this type would disrupt the markets and may also change equilibrium pricing strategies at least for a period. Such actions would increase competitive intensity.

Based on this analysis there is no real or substantial risk that the proposed transactions will substantially lessen competition in markets for scheduled waste collection services. Large scale disruptive entry would be required to substantially intensify competition. This is possible under the factual scenario but extremely unlikely under the counterfactual.

### **Unscheduled Collection Services**

No material changes are expected in competition for the supply of unscheduled waste services by gantry, huka and FEL.

### **Large Multi-Site Customers**

In the large multi-site customer market, customers appear to enjoy discounted prices due to some combination of countervailing bargaining power and lower waste volumes as a result of better management. Ancillary services are also supplied. Though customers believe they have lower prices, there are no apparent cost efficiencies involved.

The competitive impact of the transaction varies with the method by which these customers will be supplied. There are two main options. One is that EnviroWaste continues to serve this market from its northern base using subcontractors in the relevant South Island markets. There are two feasibility tests for this outcome. The first is that a subcontractor model can be made to work, bearing in mind the degree of trust and co-operation required. Since both EnviroWaste and TPI currently use variants of this model, that test is satisfied.

The second test is that such a model could be profitable. This is not obvious, because smaller contractors have higher costs in supplying scheduled services. However our empirical analysis shows that the margins available to large operators, combined with the relatively small proportion of national demand that arises from the relevant South Island markets, will allow subcontracting to be a profitable way for EnviroWaste to serve national customers from its northern base. Using subcontractors, EnviroWaste could profitably match the prices currently prevailing in this market. EnviroWaste's margin over unit cost would only be reduced by about [CONFIDENTIAL %] of unit cost, leaving it with an attractive level of economic profit. The same analysis also applies to other established northern operators, such as JJ Richards.

It is possible that EnviroWaste and others will decline to participate in this market. In that event, large customers could self supply in the south. They would be worse off financially, but not by much. Our estimate is that self-supply would cost large customers less than [CONFIDENTIAL %] extra for collection services, and slightly more by the time ancillary services are included.

Even in this worst case scenario (southern self-supply by large customers), there will still be close competition in this market, because the northern markets are well served by large firms and there is a healthy competitive fringe in the south. The cost increase large customers would suffer is less than [CONFIDENTIAL %]. Using that price outcome as an indicator of the change in competitive intensity, it can be concluded that competition would not be substantially lessened in this market.

### **Co-ordinated Market Power**

The proposed transaction is very unlikely to increase co-ordinated market power, for several reasons. First, collusion would be difficult in collection markets because of

- Differences in firm size and therefore in their abilities and incentives;
- Product differentiation by collection container, frequency and weight;
- Tailored rather than posted prices; and
- The fact that retaliation against any deviation from a collusive outcome would be difficult and very costly.

Secondly, the firm being bought has shown no history of maverick conduct. While it is a well operated company, our modelling indicates that its pricing strategy has been to target levels that are broadly in line with entry costs.

Third, and most importantly, the objective of collusion is to increase prices. However in this case price increases will merely attract entry. Whether that entry is by small fringe operators, or by a well organised and capitalised firm intent on capturing a large market share, it would seriously affect at least one of the parties to any co-ordinated outcome.



# 1. Introduction

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The purpose of this report is to assess the competitive implications of a set of applications to the Commerce Commission by Transpacific Industries Group (NZ) Ltd (TPI) for clearance to acquire businesses in the South Island. The specific applications to which this document refers are allocated file numbers 760, 761, 768 and 769 on the Commission's website.

This report draws on two earlier papers prepared for TPI which subsequently have been provided to the Commission. One of those investigated the sustainable market structures for collection services.<sup>3</sup> The other was focused on the demand side of the collection markets and studied the extent of substitutability between different collection services.<sup>4</sup> The intention with the present paper is to take a broader view of the transactions. Within this remit, it is possible to consider all of the facts surrounding the transactions, to select the most important ones, explain why they are important and what can be inferred from them, and eventually arrive at a well-founded conclusion about the impact on competition.

Vertical integration issues are not considered in any detail in this report. They are avoidable in respect of the Kate Valley landfill (which serves Christchurch), on the basis that the applicant will have no ability to discriminate against collection rivals at this facility because pricing is controlled by local authorities. The upstream (landfill and transfer station) markets are also affected in Dunedin, but in that case there is existing competition for both upstream functions, so market power is not a material concern.

The report is structured as follows:

- The proposed transaction is summarised in section 2
- Market definition is analysed in section 3
- Competitive differences between the counterfactual and factual scenarios are examined in:
  - Section 4, for scheduled collection services;
  - Section 5, for unscheduled collection services; and
  - Section 6 for large multi-site customers.
- Issues arising from the potential for co-ordinated market power are addressed in section 7.

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<sup>3</sup> see footnote 1

<sup>4</sup> see footnote 2

## 2. Proposed Transaction

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Transpacific Industries Group (NZ) Ltd (TPI) has applied to the Commerce Commission for clearance to acquire 100% ownership of four businesses in the South Island. The applications were made pursuant to s 66(1) of the Commerce Act 1986.

All of the business at issue are currently operated by EnviroWaste Services Limited. They are separated by location, as follows:

- Blenheim and Nelson;
- Timaru and Oamaru;
- Dunedin; and
- Christchurch.

These applications are allocated file numbers 760, 761, 768 and 769 respectively on the Commission's website. They are distinct applications, but this document refers to each of them.

A previous clearance application by TPI included these businesses among a larger set of businesses in a single clearance application. That application was declined, and is reported in Decision 604. As a consequence, the facts and analysis contained in Decision 604 are relevant to this assessment of competitive impact.

## 3. Relevant Markets

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In a trade practices matter, the purpose of market definition is to assist in analysing the conduct at issue. For merger analysis, structure rather than conduct is the main focus, and the role of market definition is to help analyse the way a new market structure, as a result of the merger, will affect competition. The Commission has clear guidelines over market definition,<sup>5</sup> but recognises that it is often not possible to be very precise about the boundaries of markets. Moreover, the parameters normally adopted by the Commission in defining markets (footnote 5) have the effect of erring on the side of defining narrow markets,<sup>6</sup> so it is correspondingly important to consider the impact of competition from neighbouring markets.

The applicants and the Commission are broadly agreed over functional market definition. Both recognise three distinct vertical layers supplied by collection services; transfer stations; and landfills. Similarly there are few significant differences of view over geographic market definition. Areas of common opinion will be avoided in this report. The issues that do need considering are:

- A national multi-site market; and
- Product markets

### 3.1. National Multi-site Market

In decision 604, the Commission concluded that there is a national market for waste management services provided to multi-regional (national) customers. These customers were described (para 175) as being “business customers located in two or more distinctive collection geographic markets across the country”.

Distinguishing features of this market were said to be that it:

- Delivers “a waste management service at a much lower cost” relative to contracting individually for supply to each site; and
- Often combines at least two types of collection services in a single contract.

In addition to waste collections, the Commission cites nine further services that are “required by customers in this market” (paragraph 176). They are:

- analysis and rationalisation of waste and recyclables collection methods;
- introduction of waste and recyclables monitoring/minimization programmes including staff training;
- introduction of recyclables monitoring/maximisation programmes including staff training;
- offsetting of waste costs through the sale of recyclables;
- a single centralised point of contact with their waste management provider;
- amalgamation of invoices from multiple business sites;

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<sup>5</sup> The SSNIP test is used, with “small but significant” usually being defined as 5%, and “non-transitory” being interpreted as a one-year time frame.

<sup>6</sup> 10% for two-years would not be unreasonable alternatives to 5% for one-year.

- collation and presentation of waste and recyclables volume data from these sites;
- liability protection; and
- employee safety training.

The term “required” implies that there is a single bundle consisting of waste collection plus nine other services, and that bundle is the product that is always or usually traded in this market. At least some of these services seem to have quite a weak connection with waste, or at least have a wider application within a firm than simply waste. For example, “liability protection” sounds as though it is mainly an insurance function, and “employee safety training” will be required to address a range of non-waste areas for many companies.

Such considerations suggest that there is merit in thinking more carefully about the scope of this market. It is convenient to divide the following discussion along market dimension lines.

### 3.1.1. Functional Dimension

The discipline of the SSNIP test is helpful in understanding the role of these other (non-collection) services. Is it likely that one could profitably implement a SSNIP on a smaller set of products than those in the Commission’s list? The answer is almost certainly yes. In explaining this view, it is useful to start as if we were defining functional markets, by asking which services are or could be supplied separately. This test eliminates *at most* three services from consideration as distinct markets:

- “a single centralised point of contact with their waste management provider”;
- “amalgamation of invoices from multiple business sites”; and
- “collation and presentation of waste and recyclables volume data from those sites”.

For these three services, there is some logic in treating them as part of a collection service, though whether doing so is enough to widen the geographic boundaries of the market remains to be considered. The second and third could readily be done by customers.

All of the other six services (analysis and rationalisation of waste and recyclables collection methods; introduction of waste and recyclables monitoring/minimization programmes including staff training; introduction of recyclables monitoring/maximisation programmes including staff training; offsetting of waste costs through the sale of recyclables; liability protection; and employee safety training) are or could be supplied separately. Indeed, in some cases that would eliminate a potentially serious conflict of interest.<sup>7</sup> None of these six services have obvious substitutes, so they

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<sup>7</sup> There is an inherent conflict of interest in a firm simultaneously supplying a service and a way of eliminating demand for that service. Thus, waste collection companies tend not to be ideal advisors on waste reduction, and it is rare to see electricity supply companies running highly effective demand reduction programmes. The modern trend towards corporate social responsibility does lead to some moves towards demand reduction in both of those cases, but the conflict of interest remains.

each appear vulnerable to monopolisation. Since the SSNIP test seeks the *smallest* space that could be monopolised, they each appear to be separate markets.

For example, “employee safety training” is one of the services on the Commission’s list. This activity is a distinct industry, supplied by firms that are familiar with occupational safety and health regulations and purchased by a wide range of firms whose safety needs vary enormously. Safety training is indeed required for persons working with waste and the associated machinery. But the mere fact that a firm purchases waste collection services and also acquires safety training services that extend to waste handling does not imply that those services are in the same market. These services have a common purchaser, but they can be separately monopolised.

The six services that are obviously separable from waste collection are best viewed as ancillary services to waste collection. An analogy with construction services may be helpful. When one embarks on a building project, a wide range of skills are required. They may include design, carpentry, plumbing, electrical work, etc. A good builder will often recruit subcontractors for the client, and some clients will prefer to pay for that aggregation service rather than spend their own time and energy recruiting multiple tradespersons. But that does not negate the fact that plumbing services are a distinct market in its own right (ie one could readily conceive of them being successfully and profitably monopolised).

### **3.1.2. Geographic and Customer Dimensions**

Turning now to the three services that clearly require some degree of integration with waste collections, the Commission concludes that customers in this market generally prefer them to be supplied, along with at least two forms of collection service, by a single firm.

The Commission interviewed four large customers and reported in Decision 604 that this form of supply reduced the price faced by customers. There are two possible explanations for this, both of which could be operating: one is that the tender process itself has reduced supply prices by intensifying competition; the other is that waste volumes have fallen as a result of more active management.

It is worth noting that the total cost of supply does not fall as a result of this contracting practice, because the same or similar collection and administrative resources are used. If anything, total costs may increase through the demand side’s preference for integrated billing and information supply.

It follows that an important reason this group of customers save money is largely because they have greater bargaining power as a result of having higher volumes. Geography only matters to the extent that the aggregate volume of these customers is spread out over a wider area. By contrast, a firm with 10 sites in a single city would achieve similar outcomes to those enjoyed by nation-wide customers that are reported in Decision 604. Thus, a more appropriate way to think about these trades is that they affect the customer market definition dimension rather than the geographic dimension.

One advantage of viewing large customers as a distinct market is that doing so avoids some peculiarities that arise under the Commission's geographic characterisation. It does that because it admits a more flexible view of supply options. The geographic definition appears to impose a combinatorial constraint, which effectively means that two complete national chains must continue to exist to preserve competition. Thus, for example, TPI could not sell its Christchurch business to *any* of the other operators in that location, or to a new entrant in that market, because TPI could not then supply the market with what it requires.<sup>8</sup> This interpretation may sound somewhat pedantic, but it is in fact a natural consequence of the Commission's view that physical presence in each location is needed to compete in this market (see paragraph 192).

There is no dispute over the existence of an economically distinct body of demand from large customers. Nor is there any dispute over the fact that these customers have sufficient bargaining power to extract material discounts from suppliers. The real issue over whether or not a coalition of regionally distinct firms, co-ordinated by one of them or by a third party, could compete to these customers.

The Commission addresses this prospect only briefly in Decision 604, at paragraph 188, and at paragraph 192. In paragraph 188, the Commission quotes a commercial rival of the applicant as saying that the coalition model "involves a great deal of trust and co-operation between companies (who are potentially rivals)". Co-operation is clearly required, but firms often do co-operate if they stand to gain financially as a result so this is hardly a material barrier. Trust is unlikely to be present between rivals, but the scenario at issue only arises because the firms are *not* rivals in the relevant (geographic) markets. It therefore seems incorrect to deny the prospect of coalition supply to large customers. To support such a view, one would need to explain why *potential* rivalry would deter firms from co-operating to achieve an immediate financial gain.

More important than this argument however, is the fact that co-operation does currently exist for the relevant purpose. For example, although TPI currently has no physical presence in Blenheim it still provides service to customers with Blenheim sites. To achieve this, TPI currently subcontracts collection work to EnviroWaste. There is nothing special about Blenheim or EnviroWaste that makes them more likely to accommodate such activity: it could equally well occur in other locations and with other parties.

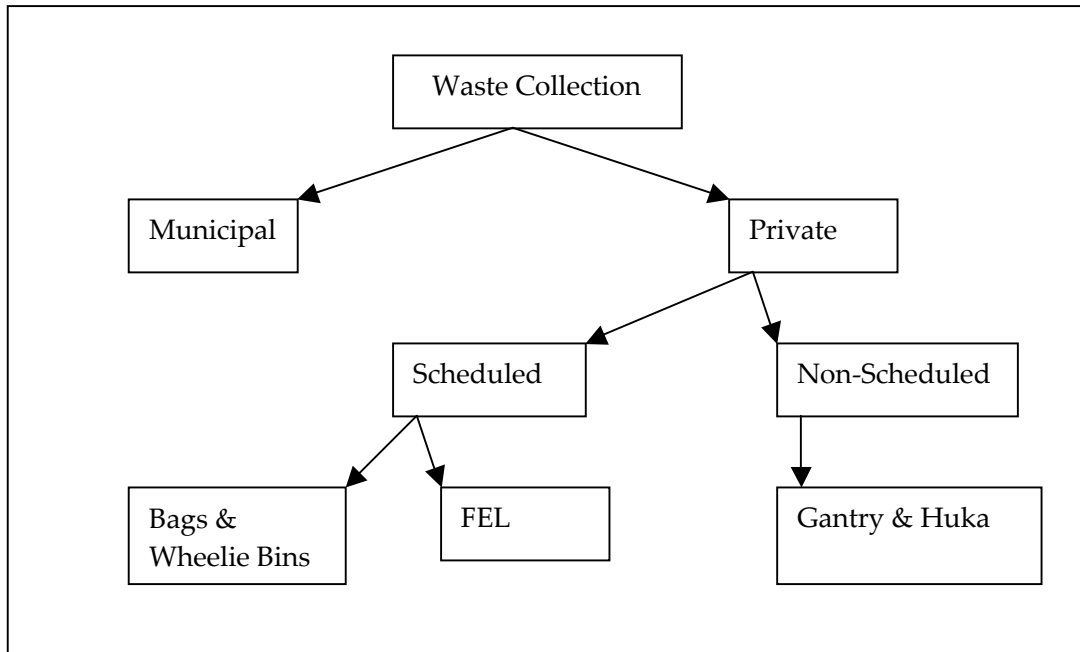
In summary, this market seems best characterised from the customer dimension. It is often spread over distinct geographic markets but it need not be. The key economic features are that buyers have relatively large volumes from several sites, seek more than just collection services, and enjoy a degree of bargaining power.

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<sup>8</sup> It is worth noting here that, under a strict interpretation of the Commission's view on the national multi-site market, the market is already a monopoly. That is because TPI is the only firm that serves all nine markets in table 5 (page 43). EnviroWaste/Manawatu Waste serve eight of the markets, but it cannot serve a large customer that has sites in New Plymouth.

### 3.2. Product Markets

The relevant product markets include the collection, transportation and disposal of solid and non-hazardous waste. In its analysis of product markets, the Commission has been concerned (paragraph 119) that “broader product market definitions...might distort relevant competition issues”. That is certainly possible, just as there are also risks associated with defining markets that are unduly narrow.



**Figure 1** Commerce Commission Division of Collection Markets

The waste collection markets defined by the Commerce Commission are shown in Figure 1. A distinction is made between municipal contracts and privately contracted services. That seems reasonable given the special features of most municipal contracts, which are awarded through competitive tender for relatively long periods. As the Commission observes, competition for the supply of these services is “for” the market rather than “in” the market (paragraph 132). The boundaries of the municipal markets are blurred somewhat, especially in places where council contracts compete with private services.

#### 3.2.1. Scheduled and Non-Scheduled Services

The next division the Commission makes is between scheduled and non-scheduled services. This seems a reasonable and useful way to divide the private collection markets.

#### 3.2.2. Collection Method Markets

The final layer of collection market division used by the Commission splits services according to the means of collection. The evidence in favour of this division is weak; it

would be more appropriate to conclude that the collection markets are those for scheduled and non-scheduled services.

Some of the issues are discussed at paragraph 161 in Decision 604. It posits limited substitutability on both sides of the candidate markets. However on the supply side, the limit to substitutability relies on a view that wheelie bins and FELs are scheduled services while gantry and huka services are not. That view appears to be incorrect, as the data in Table 1 show.

**Table 1** Customer shares that conflict with Commission's assumptions (source: TPI data)

[CONFIDENTIAL]

Nelson	[ ]%	[ ]%
Christchurch	[ ]%	[ ]%
Timaru	[ ]%	
Dunedin	[ ]%	[ ]%

It is true that only very small shares of the total number of gantry services are provided on a scheduled basis, but substantial shares of TPI's FEL customers receive unscheduled (ie on call) services. It is not difficult to understand why customers might vary in their demand for scheduled and unscheduled services. Varying degrees of price-sensitivity would explain such an outcome. For example, some customers may take the view that waiting for a container to be full before collection delivers greater value for money, or protects the environment better. Others may prefer to be less engaged with their waste and would therefore be more likely to prefer a scheduled service.

In any event, the fact that a large fraction of FEL demand is on call shows that this type of collection serves customers wanting scheduled and non-scheduled services alike.

Customers make their waste collection decisions on the basis of several criteria, including price and convenience. The outcomes, as reflected in the form of collection, vary widely across customers. Some large organisations, such as Burger King, use wheelie bins while others prefer FELs. There is a similarly blurred division of usage as between FEL and gantry services.

### 3.3. Conclusions on Market Definition

For the reasons discussed above, and recognising that the focus here is on four South Island locations, it seems most appropriate as a matter of fact and commercial common sense, to define the following collection markets.

- A multi-site customer market, in which the customers are firms with a large aggregate volume of waste spread over several sites;
- Regionally distinct non-scheduled collection markets, in which the customers are firms that prefer collections to occur when waste containers are full; and
- Regionally distinct scheduled waste collection markets, in which customers are households and firms that prefer regular collection frequencies.



Since these definitions are different to those adopted by the Commission, the implications of these differences will be traced through the competition assessment that follows and the competition implications are examined using both sets of market definitions.

## 4. Competition for Scheduled Services

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To assess the competitive effects of the proposed transactions it is necessary to compare two scenarios: the counterfactual, in which the proposed transactions do not proceed; and the factual, in which those transactions occur. This section adopts a standard analytical framework to compare competition in these scenarios. Attention is restricted to individual (regional) markets for scheduled waste collection services.

### 4.1. Counterfactual

The counterfactual scenario provides a benchmark against which the risk of a substantial lessening of competition is compared. Decision 604 discusses several possible counterfactual market structures (paragraphs 242-5) and concludes that the status quo is a reasonable benchmark. That view is also adopted here.

Before considering the factual scenario, it is useful to characterise the competition that is currently in process. Our previous work, and particularly the work on sustainable market structures, is relevant here. That work shows two things:

- that entrants can survive in all of the regional wheelie bin and FEL collection markets as defined by the Commission; and
- that entrants nevertheless have higher unit costs than firms with larger market shares.

#### 4.1.1. Route Density

Route density is the fundamental reason that unit costs fall with market share in scheduled collection service markets. Our previous work<sup>9</sup> found that natural logarithm models provided a good explanation of route densities. An illustration of our route density estimates is shown in Figure 2.

As discussed in our previous report on market structures, there are sound logical reasons for expecting the basic shape observed in that diagram. However since it has largely been impossible to observe route densities other than from TPI, the resulting models are necessarily a simplification of reality. We calibrated our models to actual TPI data showing kilometres actually run and bins actually lifted in each region. They were cross checked against the only non-TPI information that was available to us (which was contained in Decision 604): that of Manawatu Waste's FEL service in Palmerston North.<sup>10</sup> That independent information was predicted to a very high degree of accuracy by our models.

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<sup>9</sup> see footnote 3

<sup>10</sup> The Manawatu Waste figure was reported in Column J of attachment 9 to Decision 604.

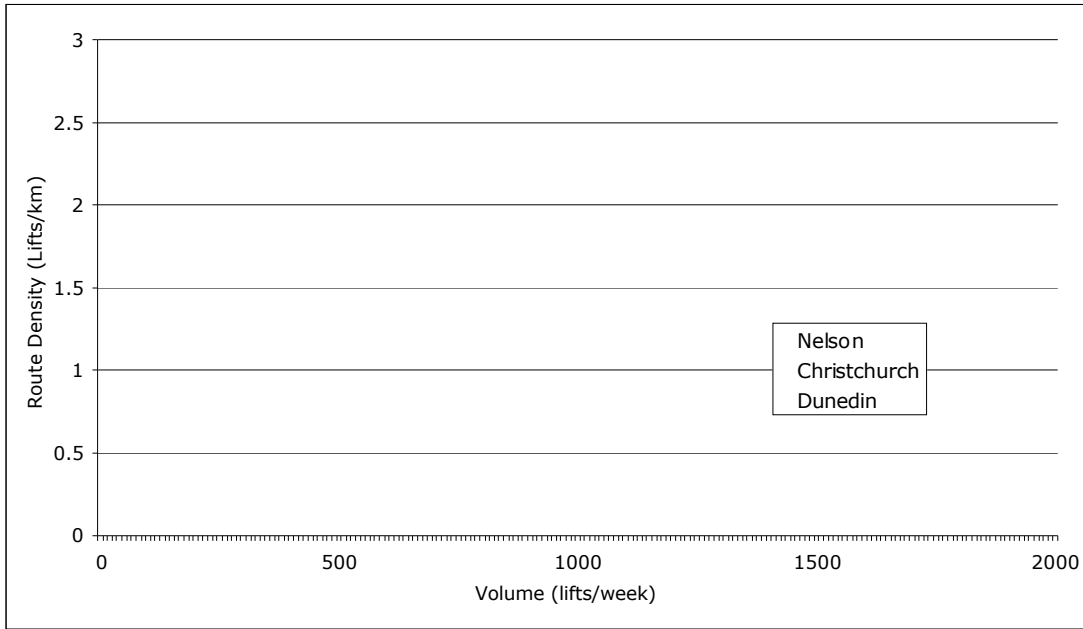


Figure 2 Wheelie Bin Route Density Models [CONFIDENTIAL]

#### 4.1.2. Average Cost Curves

Our previous work combined these regionally distinct route density models with separate financial models of a one-truck entrant providing wheelie bin and (separately) FEL service. In combination, those models were able to produce estimates of the average cost curve for an entrant in each of the (privately contracted and scheduled) collection markets defined by the Commission. These average cost curves all have the same basic shape, which is illustrated in Figure 3.

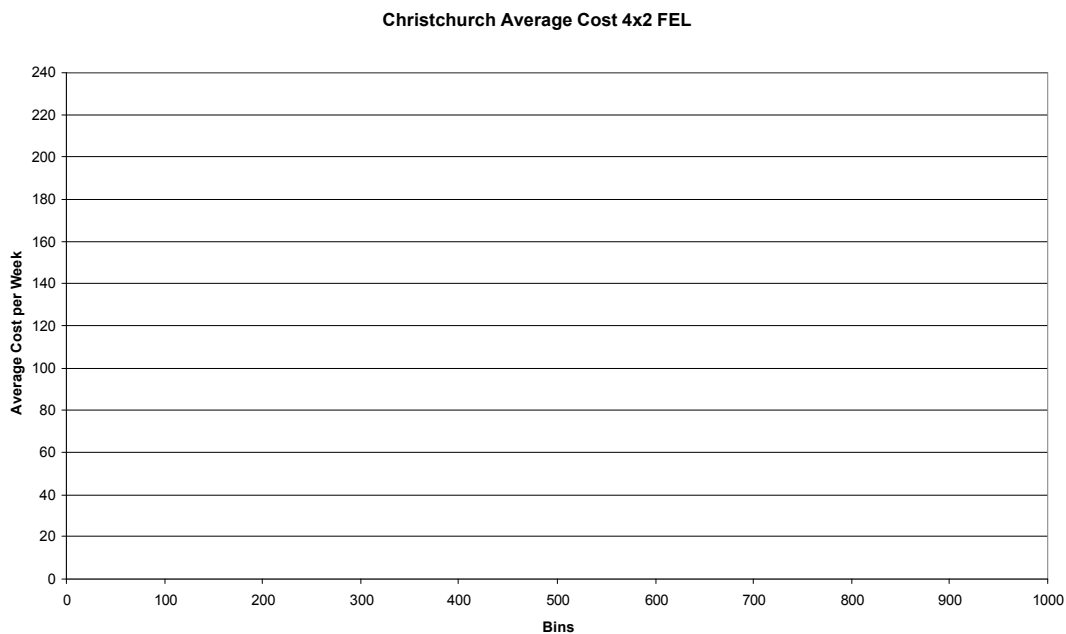


Figure 3 Average Cost Curve: 4x2 FEL Service in Christchurch [CONFIDENTIAL]

The break-even scale identified in Figure 3 is the number of FEL bin service customers an entrant would need in Christchurch (if all customers required just one bin service per week) to cover its costs. It takes as given the market price for FEL service in Christchurch.<sup>11</sup> Thus, the price of FEL service in Christchurch is above the minimum of average cost. This basic fact was also found in all other relevant wheelie bin and FEL collection markets.

#### 4.1.3. Interpretation

These findings raise questions about competition in the markets for scheduled collection services. Larger firms operating in these markets, notably TPI and EnviroWaste, are located well to the right of the break-even scale identified in Figure 3, in all relevant markets. They have both been serving these markets for at least five years. Yet prices have not fallen to the point where entrants are unable to compete.

These facts lead to two inescapable conclusions. First, large firms in these markets are pricing at approximately the average cost of a new entrant, and are therefore earning economic profits. This is clear from the cost modelling, but it can perhaps best be illustrated by comparing the unit cost of a small firm located at the break-even point with the unit cost of a firm operating a single fully utilised truck. The difference, expressed as a percentage of the larger firm's cost, represents the large firm's mark-up over average cost. It is shown in Table 2 for all relevant markets.

<sup>11</sup> More precisely, it assumes that the entrant can sell FEL bin services at the same price as TPI, on average.

**Table 2** Mark-up Over Minimum Average Cost [CONFIDENTIAL]

Nelson	[ ]%	[ ]%
Christchurch	[ ]%	[ ]%
Timaru/Oamaru	[ ]%	n/a
Dunedin	[ ]%	[ ]%

It is worth noting that small operators are indeed present in most, though not all, of these markets.

The second conclusion is that this pricing conduct by the relatively large operators appears to be a stable equilibrium. TPI has informed us that:

- EnviroWaste has been an operator with significant scale in South Island markets for five or more years;
- Price wars have not erupted over that time; and
- Small operators have been a consistent feature of these markets over this time.

#### **4.1.4. Conclusion on Competition under the Counterfactual**

It is agreed that the existing market structure is the most likely counterfactual scenario. Since the pattern of competitive conduct has not altered materially for several years, it is unlikely to change under the counterfactual (ie status quo) market structure. It must be concluded that within these markets there is no real and substantial risk of materially more aggressive pricing by a large operator under the counterfactual.

## **4.2. Factual**

In most of the markets defined by the Commission it is reasonable to characterise the factual market structures as involving the amalgamation of the two largest operators. What is the impact of that on competition? To address this question it is helpful to split the analysis along market structure lines, and then consider the conduct that is likely to flow from each structure. The two most likely structures are

- TPI remains the only large firm in each market; and
- The transaction provokes large scale entry.

These structural scenarios will be considered separately.

### **4.2.1. TPI Remains as the Only Large Firm**

Under any factual scenario, TPI will have a larger market share. In most regional markets, it will only be competing against a fringe of quite small operators. TPI will have two strategy options available to it:

- Aggression, in which it uses its cost advantage to drive small rivals from the market; and
- Accommodation, in which it continues to price at levels that allow entrants to survive.

Given the cost differences between large and small firms, the aggression strategy could succeed in driving small firms from the market, and do so without breaching the price floors that define predation. This strategy would be a divergence from current and previous conduct, but it is nevertheless an option that needs to be considered.

In the short run, the aggression strategy would intensify competition. But once a market was monopolised, TPI would presumably seek to increase its prices to recoup the profits lost during the price war with its former rivals. The critical issue for a competition assessment is the relationship between the increased prices (which would follow monopolisation) and today's prices. If prices are likely to be higher, it is fair to conclude that competition is lessened under this scenario (notwithstanding the temporary period of high competitive intensity); otherwise the reverse conclusion must apply.

The difficulty facing TPI as a monopolist is that there is a large pool of potential small scale entrants, because the business is (or at least appears, to potential entrants) relatively straightforward. It does not require unusual skills. Marketing channels are obvious (door knocking, leaflets, yellow pages advertising, the book-a-bin website) and not concentrated. The only specialised assets required are trucks and bins, and these are readily available at reasonable prices in second-hand markets.

Thus, to maintain a monopoly, TPI will in all likelihood need to drive not just the existing small players from the market, but a continuous stream of small players. As soon as it increases prices to recoup the cost of monopolising the market, it creates the conditions for another firm to enter.

This cycle needs to be broken if TPI is to enjoy prices that are sustainably higher than those in existence today. Equivalently, for there to be a substantial lessening of competition, TPI needs to find a way to break the entry cycle.

The only way to achieve this is to persuade *all* potential entrants that they will be eliminated, and so should not enter. That is quite difficult in waste collection markets because of the large number of potential entrants. The conclusion is that even if it were the single large waste collector, there are serious doubts over TPI's *ability* to set prices that are durably and materially in excess of entry costs.

It is also important to consider TPI's *incentives* under this scenario. For that, the relevant question concerns the difference in TPI's expected profitability between the two strategies outlined at the start of this sub-section: aggression and accommodation.

The cost differential data from Table 2 show that the accommodation strategy is quite profitable. Under the factual scenario it will be more profitable for TPI (but not more profitable in aggregate) because it will earn margins in the range of those in Table 2 over larger volumes. What is the nature of the *additional* profit that TPI would earn if the aggression strategy was successful in maintaining an outright monopoly? There are two possible components:

- Margin on volumes previously supplied by the competitive fringe; and
- Additional margin across all volume if higher overall prices can be maintained.

The first component is of modest size. The second component is unlikely to exist at all, since as discussed above it requires TPI to develop a sufficiently aggressive reputation that it deters all future entrants.

For these reasons, it seems very unlikely that even an outright monopolist of a scheduled waste collection market will be able to durably price in excess of the cost of entry.

#### **4.2.2. Large Scale Entry**

The only other factual scenario that needs to be considered is that, in markets where the proposed acquisition combines the two largest operators, it also provokes entry on a large scale. In this scenario, the entrant is likely to be a sophisticated and well resourced operator, experienced in the industry. Such a firm may view the proposed acquisition as creating space for it to effectively share one or more collection markets with TPI, or even to displace TPI's position as the only substantial operator.

One firm that might take such a view is EnviroWaste, which has [CONFIDENTIAL]. Others such as JJ Richards may emerge once the transaction is completed.

This scenario has the potential to disrupt the pattern of conduct that supports the existing equilibrium and would guarantee aggressive competition for TPI. This scenario is unlikely in the counterfactual.

#### **4.2.3. Summary of Competition in the Factual Scenario**

The *outcome* of competition in the factual scenario is most likely to be similar to what is currently observed: prices will be around the level at which a small scale entrant can survive without prospering.

There are quite small probabilities of two different outcomes. One involves TPI accepting profit downgrades and investing further capital to develop a reputation for aggression which is sufficient to deter future small scale entrants. This is unlikely because TPI would have to accept loss of profits for some time and invest further capital to gain the reputation for aggression. The other involves entry by a well resourced and knowledgeable firm determined to capture the market share TPI has acquired through the transaction. It is reasonable to assume that the first of these will also make the second more likely to emerge, since it involves higher prices. Since this linkage will be apparent to TPI, the first outcome (a durable outright monopoly) seems implausible.

### **4.3. Comparison Between Factual and Counterfactual**

Prices are currently being set with reference to the cost of small scale operators. This allows larger operators including TPI to earn economic profits, the source of which is their better route densities, which lead to lower average (and marginal) costs. Intense

competitive pressure is therefore felt most strongly by the small operators, who can reasonably be thought of as “cellophane” competitors.<sup>12</sup>

This situation is unlikely to change under the factual because accommodation of small scale firms is more attractive than trying to drive them from the market. There are two reasons.

- First, entry is reasonably easy, even though expansion is difficult (this is consistent with the Commission’s views at paragraph 363 of Decision 604). Small scale entry does not threaten the profitability of larger firms, whether they control all or only half of the balance of the market, so accommodation of small scale entry remains an attractive strategy in the factual.
- Second, a more aggressive strategy, in which small firms are driven from the market (without predation), is risky for two reasons. First, it requires investment in a reputation for aggression, and that investment will only be worthwhile if the desired reputation is perceived by most of the potential entrants. Second, success results in higher prices, which are more likely to attract a sophisticated large scale entrant.

To conclude, when the full range of options available to TPI in the factual scenario are considered in detail, there is no real and substantial risk that the proposed transactions will substantially lessen competition in markets for scheduled collection services.

This conclusion is not materially influenced by whether markets are defined as proposed in section 3.3, or as defined in Decision 604.

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<sup>12</sup> The cellophane term refers to a well known fallacy arising from a 1950s case (United States vs. E.I. du Pont de Nemours & Co. 351 U.S. 377 1956; 76 S. Ct. 994; L. Ed. 1264). It turns on the fact that an outright monopolist (eg of cellophane) may find it profitable to increase its price to the point where it induces competition from higher cost or lower quality products.



## 5. Competition for Unscheduled Services

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In Decision 604, only gantry and huka collection services were interpreted as being unscheduled. The new information presented in Table 1 indicates that a significant fraction of FEL services are also unscheduled, at least in the South Island markets relevant to this assessment.

While the fixed costs of vehicle operation are a source of some scale economies for unscheduled services, these are not magnified by the influence of route density in the same way as discussed above (section 4.1.1) for scheduled services.<sup>13</sup> As a consequence, operators with large market shares do not automatically enjoy a significant cost advantage over their smaller rivals. Put another way, low average costs are likely to be a cause, rather than a consequence, of large market shares in unscheduled services.

In Decision 604, the Commission found that the proposed transactions would aggregate market shares in the relevant South Island markets, and that the resulting shares would be outside its safe harbour limits (paragraph 431). However it accepted the proposition that entry into these markets is easy, and was satisfied that the aggregated entities would be constrained by existing competition or potential entry or expansion.

That view seems appropriate under the Commission's market definitions. Including unscheduled FEL services in these markets does not materially alter the analysis; it merely adds another form of competitive constraint.

### 5.1. Conclusion on Unscheduled Services

There is no real and substantial risk that the proposed transactions will result in a substantial lessening of competition in markets for unscheduled waste collection services.

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<sup>13</sup> There will however be some economies with unscheduled FEL services as on call bins are normally collected within a scheduled route.

## 6. Large Multi-Site Customer Services

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It has been concluded above that the proposed transactions are unlikely to substantially lessen competition in markets for scheduled and unscheduled waste collection services. That conclusion holds irrespective of whether markets are defined from the supply side (as the Commission preferred) or from the demand side proposed above.

In each location, collection services are also provided to a distinct, customer-specific market, along with several other ancillary services. Those customers are large and have several sites. Under the Commission's view, those sites span more than one regional location. The set of ancillary services definitely includes ones that are not functionally separable from collections, such as the amalgamation of invoices from multiple business sites. Under the Commission's view, it also includes services that are functionally separable such as employee safety training.

Aggregation of market share in collection activities clearly has the potential to affect competition for the provision of waste services to large multi-site customers. The likelihood of a substantial lessening of competition in this market is assessed here through a comparison of competitive conditions in the factual and counterfactual scenarios.

### 6.1. Counterfactual

As discussed above (section 4.1), market structure in the counterfactual scenario is most likely to be consistent with the status-quo. The factual evidence presented in Decision 604 indicates that TPI and EnviroWaste both serve customers in this market, whichever way it is defined. TPI currently has approximately [CONFIDENTIAL %] of the customers by number, so it should be reasonable to draw inferences from analysis of their data.

For analytical purposes, it will be assumed that these customers have, in recent years, enjoyed materially lower prices and that they also receive a range of ancillary services.<sup>14</sup> The Commission interviewed four large customers, who quoted price reductions relative to those paid to a fragmented set of operators. Quoted price reductions varied from [CONFIDENTIAL %]; for the analysis that follows a representative figure of [CONFIDENTIAL %] will be used.

The analysis in section 4.1.4 helps to explain how price reductions may be affordable. It showed that firms with relatively large market shares in scheduled collection services enjoy significant cost advantages over smaller operators occupying the "competitive fringe". When multi-site customers contracted with the competitive fringe, the higher unit costs of those operators place a floor under the available prices. That floor is materially lower for larger operators. They are forced closer to the (unit cost) floor by the significant bargaining power of multi-site customers.

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<sup>14</sup> The source of price reductions was discussed in section 3.1.

Our analysis of unit costs for scheduled collection services did not include the major sources of national demand which are from Hamilton north. However it is reasonable to assume that unit cost advantages in those markets are towards the larger end of the range of mark-up values reported for fully utilised equipment in Table 2, ie around [CONFIDENTIAL %]. On that basis, a [CONFIDENTIAL %] discount for a large customer would represent approximately an even division of surplus between the customer and the operator. That outcome is in line with what would be predicted by simple models of bilateral bargaining.

There is no reason to expect that these competitive outcomes will change materially under the counterfactual. Large customers are most likely to continue to be served in the same manner, and to continue to enjoy the competitive benefits discussed in Decision 604.

It seems reasonable to expect that the size of this market may grow over time. That would occur if markets in New Zealand generally become more concentrated, so the average size of firms grows, or if similar contracting practices are adopted by smaller firms. As this happens, the existing geographic distribution of demand is likely to intensify in line with the general drift of population and economic activity to the northern parts of the country.

There may always be some customers who are mainly or solely located in the South Island. However they are exceptions to the general pattern and likely to become more so over time.

## **6.2. Factual**

In the factual scenario, EnviroWaste will not have a physical presence in the relevant regional collection markets for scheduled and unscheduled waste collection services. However it will retain several key assets:

- Collection businesses in the largest regional markets in the country (from Hamilton north);
- A well established joint venture relationship with Manawatu Waste; and
- A good reputation with large customers such as Fonterra (see paragraph 473 of Decision 604) who credit it with having brought more intense competition to the market from which they buy.

There are also other operators with a strong presence in the northern markets, such as JJ Richards, who could develop joint ventures and a good reputation for service. In assessing competition under the factual, it is therefore necessary to consider the ability and incentive for such firms to participate in this market.

### **6.2.1. Ability to Compete with SubContractors**

There are two main issues that affect the ability to compete in this market. The first is whether a physical presence is required in each region, as the Commission considered at paragraph 192.

This seems unduly restrictive when compared with the facts. For example, EnviroWaste serves its large customers partly through a joint venture with Manawatu Waste, but even with this arrangement it has no physical presence in New Plymouth (see Table 5 in Decision 604). TPI also uses subcontractors to serve these customers in locations where it has no physical presence, such as in Blenheim.

Given that a subcontracting model is clearly feasible, the next question is whether that approach is likely to cover costs. The issue here is that, as shown above, small operators (who will be subcontractors under this approach) have higher unit costs. So adding them into one’s supply structure may make it difficult or impossible to deliver the level of cost savings currently being enjoyed by large customers.

The information required to assess this issue is available and is summarised in Table 3. It uses TPI’s revenues from its relevant customers (which has previously been supplied to the Commission), the share of that revenue relative to New Zealand wider revenue from large customers, and the mark-up estimates by region that was presented above in Table 2. In Table 3, the mark-up estimates are re-labelled as a “cost-gap” and interpreted as the disadvantage of using subcontractors (who have high unit costs) rather than ones’ own large scale collection service in each region.

**Table 3** Impact of SubContracting on Cost of Serving Large Customers (source: TPI data)  
[CONFIDENTIAL]

		a	b	a x b
Christchurch	[\$ ]	[ ]%	[ ]%	[ ]%
Dunedin	[\$ ]	[ ]%	[ ]%	[ ]%
Nelson	[\$ ]	[ ]%	[ ]%	[ ]%
Blenheim	[\$ ]	[ ]%	[ ]%	[ ]%
Timaru	[\$ ]	[ ]%	[ ]%	[ ]%
Oamaru	[\$ ]	[ ]%	[ ]%	[ ]%
TOTAL EFFECT				[ ]%

If we multiply the cost gap by the spend share and add the results, we find that the total effect of using subcontractors in all of these markets is that the cost of *national* supply is [CONFIDENTIAL %] higher than it would be if a larger scale operator was used. This is a generous estimate for two reasons:

- The cost gap column figures are the maximum of the cost gap across the two modes of collection (wheelie bin and FEL) presented in Table 2; and
- The Table 2 data are themselves the maximum gaps that could occur, given our cost models.

The reason this total effect is relatively small is that the vast majority of demand by these customers is in the northern part of the country.

As discussed above (section 6.1), even though large customers are enjoying prices in the order of [CONFIDENTIAL %] below their previous levels, the large firms serving them are also earning around [CONFIDENTIAL %] above cost. It follows that the

[CONFIDENTIAL %] cost disadvantage that would be incurred by using subcontractors in the markets at issue will still leave a comfortable margin.

The conclusion is that it is feasible to use subcontractors in these southern markets to deliver services to large customers nationwide.

### **6.2.2. Incentive to Compete with SubContractors**

If the above analysis had been conducted within the southern markets only, the results would have been reversed. On the bare facts of the matter, it is not profitable to hire a subcontractor for \$100, and charge one's customer \$75 for the service (ie a discount of 25%). However, as shown above, when this subcontract is only part of the business of a larger contract, it can be a profitable strategy.

Lest this outcome conflict with intuition, it may be helpful to note that it is well known by network economists that there is money to be made by serving parts of a network that appear unprofitable when viewed in isolation. Two examples illustrate the point.

- Suppose the cost of air travel between Wellington and Westport is \$100 but demand is such that tickets can only be sold for \$60. Viewed in isolation, the Wellington-Westport service is unprofitable. However, if enough of the passengers on that service also fly between Wellington and Auckland, and margins on that route are (say) \$80, then it can be profitable to operate the Westport-Wellington service.
- Cell sites are required to provide mobile phone coverage in an area. In many rural locations, the revenue arising from using cell sites is less than the cost of having a site there. So individually they are unprofitable. But without them, fewer customers would subscribe to the network, and less revenue would be earned in other locations. So they were profitable to install when viewed from the perspective of the business as a whole.

Returning to the example at hand, we note that demand will remain in this market in the factual scenario. EnviroWaste will be able to supply it profitably by using subcontractors. This seems the most likely scenario, especially in view of their existing reputation in this market and the surpluses available in northern markets.

If EnviroWaste chooses to abandon this market, its place will most likely be filled by another operator. Even if that does not happen, customers will not experience a return to the old days however. As discussed below, customers could readily self-supply (ie arrange their own contractors) in the southern markets.

### **6.3. Conclusion on Large Multi-Site Customers**

If the Commission's market definition is adopted, this market must be analysed at the national level. TPI's data should be broadly representative of this demand since it has around [CONFIDENTIAL %] of the customers. On a national basis, the southern markets relevant to this assessment represent almost [CONFIDENTIAL %] by value.

EnviroWaste could continue to profitably serve these customers using subcontractors, and that outcome seems the most likely. It would not result in a substantial lessening of competition because EnviroWaste could match TPI's prices, though its margin would be reduced by around [CONFIDENTIAL %] of its costs.

Another possibility is that a new firm may enter, viewing the transaction as creating an opportunity to expand geographically. A firm with a strong position in northern markets, such as JJ Richards, would be best placed to use this strategy. Competition would not be substantially lessened under this scenario.

A third possibility is that large customers arrange their own contractors in southern markets and continue to play TPI and EnviroWaste off against each other in the north. If neither of the first two outcomes arose, this would seem very likely indeed. In this scenario, customers would pay at most [CONFIDENTIAL %] more for collections. That percentage is smaller than the margin cut suffered by EnviroWaste under the first scenario above because the base is inflated by EnviroWaste's profit margin under that scenario. Table 4 illustrates with an example.

**Table 4** Price Difference for Self-Supply of Southern Collections by Large Customers (Source: TPI data) [CONFIDENTIAL]

Cost	[ ]	[ ]	100
Counterfactual Price	[ ]	[ ]	[ ]
Self Supply Price	[ ]	[ ]	[ ]
Price Difference			[ ]
Percentage Increase			[ %]

Suppose the cost of serving a typical large customer is \$100. On average, this is split between northern and southern markets<sup>15</sup> in the ratio [ ]. From the analysis above, it seems that this cost is marked up by around [CONFIDENTIAL %] for large customers (and around [CONFIDENTIAL %] for other customers). So the total price under the counterfactual is [CONFIDENTIAL \$ ], split between northern and southern markets as shown in the second row above. Now move to the factual scenario and assume that large customers are obliged (through lack of competitive national supply offers) to contract small operators in the south. Our cost modelling shows that small southern operators have costs that are up to [CONFIDENTIAL %] above their larger rivals, which implies that the self-supply price in the south is up to [CONFIDENTIAL %] above cost. However the northern price is unchanged because competitive supply remains in place there. The total effect is to increase prices by almost [CONFIDENTIAL %].

This projected price increase from self-supply is based on estimates that consistently over-state the impact, so it should be viewed as an upper bound.

<sup>15</sup> Southern markets are those relevant to this assessment (Nelson, Blenheim, Christchurch, Timaru, Oamaru, Dunedin), and northern markets are all others.

There would be additional costs required to replicate the existing quality of service in the south using subcontractors. They would arise from the ancillary services provided in these markets, particularly the information services that are linked to waste collection. The cost of those services is minor relative to the cost of waste collection however.

In conclusion, the absolute worst case scenario is self-supply in southern markets. Even in this situation, competition will still exist. It will also be intense in each location, or bundle of locations in the case of the northern markets. The total price paid will be higher than under the counterfactual, but only by around 3%. This outcome represents a change in the mode of competition, not a substantial lessening of its intensity.

## 7. Co-ordinated Market Power

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The above analysis has focussed on the potential for unilateral market power to increase as a result of the proposed acquisitions. As the structure of markets becomes more concentrated, there is also potential for co-ordinated market power to be more of a concern.

The potential for exercising co-ordinated market power can be assessed with reference to three features of markets:

- their feasibility of collusion
- the options available for detecting departures from a collusive outcome; and
- the ability to punish deviations from a collusive outcome.

In its merger guidelines, the Commission lists a number of factors relevant to assessing each of these features. While not exhaustive, the list is extensive.

In the matter at hand, and focusing mainly on the collection markets, there are several factors that suggest co-ordination is unlikely:

- the existing structure is a mix of small and large firms, so incentives and strategies are likely to vary;
- products are differentiated by collection receptacle and frequency;
- pricing is tailored to customers rather than being advertised or posted; and
- it would be difficult and very costly to punish deviations from a collusive outcome.

The impact of the proposed transaction is to remove one of the large operators from each regional market. It seems that this operator has for several years been using a similar pricing strategy to TPI, which involves aiming at prices that are broadly consistent with entry costs. That coincidence does not indicate collusion, particularly given the quite obvious unilateral advantages of pricing at entrant cost, and its very common occurrence in many other markets.

The proposed transaction seems most likely to reduce the prospect of collusion rather than enhance it. The party being bought is a successful operator by far from a maverick. In most markets, the new market structure will have TPI as the only large firm facing a competitive fringe. The resulting asymmetry of abilities and incentives makes agreement quite unlikely.

More importantly, fringe operators have a lot to lose by colluding with TPI over higher prices. Since prices are already around entry costs, any material increase will merely expose fringe operators to further competition. For TPI, the most serious risk is from entry by a well organised and capitalised rival intent on capturing the market share it has just acquired from EnviroWaste (and more). That risk exists as soon as the transaction occurs. Price increases would only serve to increase the risk.

For these reasons, there is no real and substantial risk that the proposed transaction will substantially lessen competition through an increase co-ordinated market power.