‘Reasons’ Paper in support of Fonterra’s base milk price for the 2012/13 Season

1 July 2013

Fonterra

Dairy for life

Glossary

AMF	Anhydrous milkfat
Base milk price	The average price per kilogram of milksolids paid by Fonterra for milk supplied to it in New Zealand in the 2012/13 Season.
BCP	Base commodity price, or FAS-equivalent commodity price.
BMP	Buttermilk powder
DIRA	Dairy Industry Restructuring Act 2001
DWU	Dairy workers union
EBIT	Earnings before interest and tax
FAS	Free alongside ship.
GDT	GlobalDairyTrade
kgMS	Kilogram of milksolids
MPG	Milk Price Group, the independent group responsible for calculating the base milk price.
NMPB	Notional Milk Price Business, comprising the notional milk powder manufacturing business implied by Fonterra's Farmgate Milk Price Manual.
NZD	New Zealand dollars.
RCP	Reference commodity product, comprising WMP, SMP, BMP, Butter and AMF.
Season	The period commencing on 1 June 2012 and ending on 31 May 2013.
SMP	Skimmilk powder
USD	United States dollars.
WACC	Weighted average cost of capital.
WMP	Wholemilk powder

1 July 2013

To: The Commerce Commission

1. Fonterra Co-operative Group Limited ("Fonterra"), certifies that in terms of section 150T(a) of the Dairy Industry Restructuring Act 2001 ("Act"), Fonterra considers that the assumptions, inputs and processes described in this document and set out in the documents listed in Attachments 2 and 3 and provided to the Commission pursuant to section 150T(a) are, in all material respects, consistent with the purpose of subpart 5A of the Act.
2. This view is based on our interpretation of subpart 5A, and the other relevant assumptions, views and qualifications set out in the accompanying reasons provided pursuant to s 150T(c).

Signed by 

Jonathan Mason
Chief Financial Officer of Fonterra

1 Introduction

This paper provides detailed submissions in support of Fonterra's certification in respect of the 2012/13 base milk price, as required under section 150T of the Dairy Industry Restructuring Act 2001 (DIRA). The paper has been prepared under the oversight of the Milk Price Panel, and where relevant reflects the Panel's views.

Section 150T provides that Fonterra must:

- Provide the Commission with the assumptions adopted and the inputs and process used by Fonterra in calculating the base milk price for the relevant season (section 150T(a));
- Certify to the Commission the extent to which, in Fonterra's view, the assumptions adopted and the inputs and process used in calculating the base milk price are consistent with the purpose of subpart 5A of DIRA (section 150T(b)); and
- Provide the Commission with reasons for the view expressed in its certificate (section 150T(c)).

We have separately provided the Commission with the various financial models and data used to calculate Fonterra's estimate of the base milk price for the 2012/13 season as at 31 May 2013 (Fonterra's most recent full forecast). These are listed in Attachment 2. We have also separately provided to the Commission a considerable amount of material that is confidential to Fonterra in support of various statements made in this document. This material is listed in Attachment 3.

The paper is intended to satisfy the section 150T(c) requirement to provide the Commission with the reasons for the view expressed in our certificate. The paper is organised as follows:

- In section 2, we set out our interpretation of the key legislative provisions.
- In section 3, we provide an overview of the governance and assurance mechanisms relevant to the base milk price calculation.
- In section 4, we provide an overview of the calculation methodology and it components, to provide an overall context to the submissions on individual inputs contained in the subsequent sections.
- In section 5, we consider the 'safe harbour' provisions contained in section 150B of DIRA, and set out the reasons in support of our certification that Fonterra has applied the safe harbour assumptions in calculating the base milk price
- In section 6, we set out the inputs, assumptions and processes applied in the course of calculating the revenue component of the base milk price, and provide our views on the extent to which these are consistent with section 150A of DIRA.
- In section 7, we set out the inputs, assumptions and processes applied in the course of calculating the 'cash costs' component of the base milk price, and provide our views on the extent to which these are consistent with section 150A.
- In section 8, we set out the inputs, assumptions and processes applied in the course of calculating the 'capital costs' component of the base milk price, and provide our views on the extent to which these are consistent with section 150A.
- Finally, in section 9 we comment on the internal consistency of the various inputs, assumptions and processes considered in sections 5 – 8, and set out the reasons why, in our view, the overall application of these inputs, assumptions and processes are in aggregate consistent with section 150A.

2 Our interpretation of key legislative provisions

This submission is provided in accordance with section 150T of DIRA, under which we are required to "certify … the extent to which, in [our] view, the assumptions adopted and the inputs and process used … in calculating the proposed base milk price are consistent with the purpose of this subpart", which is located in section 150A. We set out in this section the assumptions we have made regarding the interpretation of sections 150T and 150A in preparing this submission.[1] We also comment briefly on the definition of 'base milk price'.

Section 150A

Section 150A(1) provides that "the purpose of this subpart is to promote the setting of a base milk price that provides an incentive to [Fonterra] to operate efficiently while providing for contestability in the market for the purchase of milk from farmers. Section 150A(2) further provides that the 'contestability' test is satisfied if 'any' "notional costs, revenues or other assumptions ... are practically feasible for an efficient processor."

The Commission has set out its interpretation of section 150A in both its 'dry run' report[2] and its report on its review of Fonterra's 2012/2013 Milk Price Manual.[3] In brief, the Commission's view is that:

- "The primary focus of the efficiency dimension [is on] ... improving incentives for Fonterra to drive cost efficiencies."[4]
- "If the assumptions used in setting the base milk price are practically feasible, the contestability dimension is satisfied."[5]
- It is "not required to choose between the priority of the contestability and the efficiency dimensions in section 150A to assess whether the purpose is satisfied."[6]

We have previously noted that we broadly agree with the Commission's interpretation of section 150A, but again emphasise that we consider dimensions of efficiency other than productive efficiency are also relevant in considering whether the base milk price appropriately incentivises Fonterra to operate efficiently. In particular, the milk price methodology is intended to create appropriate incentives for Fonterra to make efficient and innovative investment decisions, and the absolute level of the milk price is relevant in this context.

The Efficiency Dimension

The Commission explains in para B26 of the Manual Report that its practical approach to assessing the extent to which the base milk price incentivises Fonterra to operate efficiently is to ask the following questions:

1. Have actual or notional values been used?
2. Where actual values are used:
    a. Are they consistent with the assumed product mix?
    b. Why were actual values used?
    c. Could the use of notional data instead provide a better incentive for Fonterra to operate efficiently?
3. Where notional data is used, is it exogenously determined, or is it adjusted for Fonterra's actual results?

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[1] Our comments in this section draw heavily on our submission dated 17 May 2013 on the Commission's *Process Paper – Review of base milk price calculation*, 3 May 2013 (the 'Process Paper').
[2] *Report on the dry run review of Fonterra's farm gate Milk Price Manual*, 27 August 2012 (the 'Dry Run Report').
[3] *The Dairy Industry Restructuring Act 2001 – Review of Fonterra's 2012/13 Milk Price Manual*, 14 December 2012 (the 'Manual Report').
[4] The Manual Report, p.30.
[5] The Manual Report, p.31.
[6] The Manual Report, p.31.

The Commission also notes that it considers it reasonable to use actual data where:

1. There is insufficient information to know what an appropriate notional value would be, or
2. Fonterra has very limited control over the actual costs used for the benchmark.

We address these questions where relevant in our comments in this paper. In doing so, we interpret the term 'actual value' to refer to the actual value achieved by Fonterra for the relevant input in the 2012/13 year. In many cases, inputs are derived by reference to actual values achieved by Fonterra in prior years (adjusted for relevant factors such as inflation), or by reference to the actual values expected to be achieved by Fonterra in 2012/13 (e.g. budgeted amounts). We consider these inputs to be 'notional', since within the Commission's framework their use still incentivises Fonterra to minimise (for costs) or maximise (for revenue) the corresponding actual amounts.

The Contestability Dimension

The Commission's proposed approach to assessing the base milk price against the contestability dimension of section 150A is set out in paras B27 – B37 of the Manual Report. In brief, the Commission explains that its practical approach to assessing the extent to which the base milk price is consistent with the contestability dimension is to ask the following questions:

1. Is each individual assumption or input practically feasible for Fonterra?
2. If the assumption or input is practically feasible, is this due to features unique to Fonterra which do not relate to Fonterra acting efficiently?[7] The Commission notes that if it identifies any such instances it will determine the specifics of any further review on a case-specific basis, and that this may include consideration of whether the assumption is feasible for another efficient processor.
3. Is there overall consistency among the assumptions used to calculate the base milk price?

Fonterra broadly agrees with this approach and reiterates the comments it made in its section 150L(e) reasons dated 31 August 2012 (at 6) to the effect that:

- It is important to recognise that for each particular assumption or input used, there will be a range of practically feasible options.
- While the initial focus will be on individual inputs and assumptions, when it comes to the overall milk price calculated under the Manual it may be that there are a range of "unders" and "overs" that cancel each other out.

Our detailed comments below focus mainly on addressing question (1) with respect to each input and assumption used in the calculation of the base milk price. Where relevant, we also comment on whether we consider the relevant input or assumption to be practically feasible for other efficient processors, and on the internal consistency of the various assumptions and inputs.

Section 150T

Section 150T(b) refers to "the **proposed** base milk price" [emphasis added], whereas section 150T(a) simply refers to "the base milk price". Fonterra will not finalise its milk price for the current season until after 31 July 2013 (the last day of Fonterra's financial year). Consequently, our certification and reasons, and the assumptions, inputs and processes separately provided to the Commission, are all in respect of the proposed, rather than final, base milk price for the 2012/13 season. We will provide the Commission with the inputs used in the calculation of the final base milk price for the season when the calculation has been completed, and will at that time advise the Commission of any amendments to the process or assumptions employed in the course of generating the final base milk price.

[7] The Commission suggests this might be the case if, for example, Fonterra was to retrospectively restate an assumption, presumably to arrive at a 'better' outcome than would have been achieved by a processor setting the assumption prospectively and acting optimally (footnote 43 on p.34 of the Manual Report).

In preparing our submission dated 17 May 2013 on the Commission's process paper, we explained that we proposed the key terms in the phrase "assumptions adopted, and the inputs and process used" as follows:[8]

- 'Inputs' to mean the specific values used in calculating the base milk price for the 2012/13 year. Depending on context, these values could be expressed either as a quantum ('NZD 2.3 million'), in descriptive terms ('volume-weighted average price achieved for all NZ-sourced WMP sold on GlobalDairyTrade and shipped in the relevant month'), or both.
- 'Assumptions' to mean the rationale underpinning the approach used to calculate each input, including the rationale for use of notional or actual values.
- 'Processes' to mean both:
  - the approach used to (a) generate each input and (b) aggregate those inputs to produce the base milk price, and
  - the processes and controls implemented by Fonterra to ensure individual inputs and the overall milk price accurately reflect the underlying data and rules.

Definition of base milk price

The term 'base milk price' is defined in section 4 of DIRA as meaning "in relation to a season, ... the price per kilogram of milksolids that is set by [Fonterra] for that season." We note:

- Fonterra does not pay a uniform price for each kilogram of milksolids supplied to it in a season. Among other things, the average net price per kilogram received by suppliers will vary with relative protein and milkfat content, with supply profile across the season, with water content and with milk quality.
- The output of the calculation methodology established by the Farmgate Milk Price Manual is the minimum aggregate amount that Fonterra will pay (other than in exceptional circumstances) for milk supplied to Fonterra in New Zealand, and the Manual is silent on the allocation of that minimum aggregate amount across individual supply.
- Simply as a matter of convenience, however, the Manual defines 'Milk Price' to mean the minimum aggregate amount calculated under the Manual, divided by total kilograms of milksolids supplied to Fonterra in the season.

In preparing this submission we have interpreted the term 'base milk price' as being synonymous with the (average) Milk Price calculated under the Milk Price Manual.

[8] Submission to the Commerce Commission on 'Process Paper – Review of base milk price calculation' issued on 3 May 2013.

3 Governance & assurance mechanisms relevant to the base milk price

As noted above, we interpret the term 'process' in section 150T to cover both the processes used by Fonterra to generate and aggregate the various inputs into the base milk price, and the processes and controls implemented by Fonterra to ensure individual inputs and the overall milk price accurately reflect the underlying data and rules. In addition, Fonterra has put in place a number of mechanisms to provide assurance that the Milk Price is consistent with the Milk Price Principles set out in both the Milk Price Manual and in Fonterra's constitution.

We provide a brief overview in this section of two matters:

- We set out and comment on (a) the governance and assurance processes used to ensure the that the individual inputs and overall milk price accurately reflect the underlying data and rules and (b) the mechanisms used to obtain assurance that the Milk Price is consistent with the Milk Price Principles, and
- We highlight key aspects of the processes involved in determining inputs subject to 'review year' updates.

Governance and assurance mechanisms

Fonterra has in place an extensive number of governance and assurance mechanisms to satisfy itself and other stakeholders in the milk price with respect to:

- The integrity of data used in the calculation of the base milk price that is extracted from Fonterra's systems.
- The integrity of the calculation methodology (for example, that the financial models used to calculate the base milk price are arithmetically correct, and that they contain the correct inputs)
- The consistency of the calculation methodology with the rules set out in the Milk Price Manual.
- The consistency of changes to the Milk Price Manual, and of the application of the Manual, to the Milk Price Principles, as set out in Fonterra's constitution and in section 2 of Part A of the Milk Price Manual.

These mechanisms comprise:

1. The **Fonterra Board**, which is accountable for the overall setting of the Milk Price.

2. The **Milk Price Panel**, which Fonterra has maintained since the introduction of the current milk price mechanism in 2008, and which it is now statutorily required to maintain under section 150D of DIRA. The Panel has five members, four of whom (including the chair) are independent, as that term is defined in DIRA. Two members of the Panel are Fonterra appointed directors (one of whom is the Chair), one a farmer-elected director and two are appropriately qualified nominees of the Fonterra Shareholders' Council. The current members of the Panel are John Waller (Chair) and David Jackson who are appointed Fonterra directors; David MacLeod who is a farmer-elected Fonterra director; and Richard Punter and Paddy Boyle who are nominees of the Council.

   The Panel oversees the governance of the Farmgate Milk Price and the Manual, including changes to the Manual and verification by independent external experts of key parameters (such as resource usage rates, product yields and fixed manufacturing costs). The Panel is responsible for providing recommendations to the Board on changes to the Manual and assurance to the Board that the Farmgate Milk Price each year has been calculated in accordance with the Manual. The Panel has met on eight occasions in the course of the 2012/13 season and the corresponding financial year.

3. The **Milk Price Group**, which is responsible for:
   - Calculating the actual base milk price for a year, and for providing assurance to the Board with respect to forecasts of the base milk price.
   - Advising the Panel on the interpretation and administration of the Manual, including recommending to the Panel amendments to the Manual.

- Appointing and overseeing the work of independent reviewers and other experts.
- Determining the continued consistency of the Manual and its application with the Milk Price Principles.

The head of the Milk Price Group is appointed by the Board, must be independent of Fonterra, and reports directly to the Milk Price Panel. The group is largely resourced by Ernst & Young.

4. Fonterra's external auditor, **PwC**, which is responsible for auditing the Farmgate Milk Price each year and whose work includes providing assurance on the accuracy of the calculation and of data sourced from Fonterra's systems, and that the calculation is undertaken in accordance with the Milk Price Manual.

5. **Fonterra's Internal Audit function**, which provides assurance over the integrity of data sourced from Fonterra's systems, including with respect to the controls maintained to ensure ongoing data integrity.

6. An internal Fonterra unit, the **Milk Price Management Steering Committee**, which co-ordinates with the Milk Price Group to provide management input on Farmgate Milk Price matters, including on ensuring the base milk price calculation takes into account the full range of costs and matters impacting on the revenue of a manufacturer of commodity milkpowders and their by-products.

'Review year' approach

Various rules in the Milk Price Manual specify that certain inputs into the base milk price calculation are to be 'reset' at four year intervals, with the first year in which the new inputs apply being described in the Manual as a 'review year'. The 2012/13 years is the first review year since the introduction of Fonterra's current Farmgate Milk Price methodology. Inputs subject to review year updates broadly comprise:

- Resource usage rates, including energy usages and manufacturing plant staffing requirements.
- Most categories of overhead and administrative costs.
- Repairs and maintenance costs.
- The capital costs associated with installing new manufacturing plants, together with an assessment of both average plant capacity and total capacity
- Certain inputs into the weighted average cost of capital.

The approach taken to establishing new values for inputs subject to review year updates varied across the categories summarised above, and drew extensively on independent expert input. In particular:

- Detailed quotations for the cost of new SMP, WMP, BMP, Butter and AMF plants were obtained from manufacturers of each type of plant.
- Aurecon and Jones Lang LaSalle were engaged to review the information supplied by manufacturers for completeness and reasonableness, and make recommendations on relevant inputs into the milk price (including capital costs, economic lives, manufacturing losses and relevant resource usages) based on this information.
- Ms Tina Gandell, a former senior executive of Fonterra and its predecessor company the New Zealand Dairy Group, was engaged to review the completeness and reasonableness of various inputs, including all costs of an overhead nature.
- PricewaterhouseCoopers were engaged to review the integrity of key financial models used to calculate the milk price.

4 Overview of the calculation methodology

We provide in this section an overview of the methodology used to calculate the base milk price, and cross-references to the sections of this document that contain detailed information on each component.

As described in the Milk Price Manual, the base milk price is calculated, in broad terms, as the residual amount available to pay for milk supplied to Fonterra after calculating:

1. The **revenue** that a commodity manufacturer of milkpowders and their by-products would receive in respect of product manufactured from milk supplied to it in a season, under the following assumptions:
   - Total milk supply equalled Fonterra's actual supply for a season, including the actual composition (fat, protein etc.) of the milk supplied to Fonterra.
   - Milk was allocated to the manufacture of WMP and SMP, and cream to the manufacture of Butter and AMF, in proportion to Fonterra's actual allocation of milk and cream to those products.
   - Finished product was sold at the same time as Fonterra's sales of each product.
   - The product was sold on GDT, at the same prices as those achieved by Fonterra.
   - The resulting USD revenue was converted to NZD at the same conversion rates as those achieved by Fonterra.

   The inputs, processes and assumptions applied in calculating the revenue assumed in the base milk price calculation, and our views on the consistency of each of these with section 150A of DIRA, are set out in section 6 below.

2. Less the **cash costs** that the commodity manufacturer described in (1) above could reasonably be expected to incur in respect of the relevant season. These costs include selling costs, collection costs, direct and indirect manufacturing costs, storage and other logistics costs, and various costs of an administrative or overhead nature.

   The inputs, processes and assumptions applied in calculating the cash costs assumed in the base milk price calculation, and our views on the consistency of each of these with section 150A of DIRA, are set out in section 7 below.

3. Less the **capital costs** that the commodity manufacturer described in (1) above could reasonably be expected to incur in respect of the relevant season. These costs including the costs associated with installing, financing and replacing the fixed assets required to manufacture the products (and volumes of those products) assumed in the revenue calculation, and the costs of financing the level of working capital implied by the timing of milk supply, production, sales and payment for milk (assuming the timing of payment for milk is aligned to Fonterra's).

   The inputs, processes and assumptions applied in calculating the capital costs assumed in the base milk price calculation, and our views on the consistency of each of these with section 150A of DIRA, are set out in section 8 below.

5 Section 150B Safe Harbour Assumptions

Section 150B sets out four assumptions which, if employed in the calculation of the base milk price, do "not detract from the achievement of the purpose set out in section 150A. We confirm that Fonterra has in fact made each of these four assumptions in calculating the base milk price, and comment briefly on these assumptions (including matters relevant to the interpretation of the statutory provisions) in this section.

Operation of national network of facilities for collection and processing of milk

Section 150B(a) provides that the base milk price may reflect an assumption "that [Fonterra] operates a national network of facilities for the collection and processing of milk."

We assume in interpreting this provision that it is reasonable to substitute the NMPB for Fonterra, and note that the relevant assumptions in the milk price model materially reflect the relevant Fonterra data. In particular, the model assumes the same number (and location) of commodity manufacturing sites as is actually maintained by Fonterra, and that total processing capacity by site is materially aligned to Fonterra's. This assumption is reflected in the model's allowances for site overhead costs and for site capital. The model also assumes that annual volumes of milk processed on each site are materially aligned to either (a) the volumes actually processed or (b) the volumes budgeted to be processed by Fonterra. (Budgeted volumes are only used to determine the weights placed on each site's inland freight costs.)

Size of assumed units of processing capacity

Section 150B(b) provides that the base milk price may reflect an assumption "that the size of [Fonterra's] assumed units of processing capacity approximates to the average size of [Fonterra's] actual units of processing capacity." We have previously explained that we consider it necessary to interpret this provision in conjunction with the requirement in section 150C(1) that the base milk price be calculated by reference to returns on the subset of commodities likely to be most profitable over the period of 5 years from the time the portfolio of commodities is determined, from which it follows that the relevant processing capacity in this provision is Fonterra's capacity for the manufacture of the reference products.[9]

The relevant provision in the Milk Price Manual is contained in Rule 24 in Part B, which provides that "the overall weighted average daily processing capacity of all Standard Plants ... [should be] materially consistent with the overall weighted average daily processing capacity of the [relevant Fonterra] plants [at the end of the Review Period]." The end of the current review period is 2016. In contrast, section 150B(b) looks to whether the processing capacity assumed in the base milk price approximates Fonterra's average capacity for milk price products in 2013.

We can confirm, however, that despite the difference in timeframes take into account in the Milk Price Model and in section 150B(b), the average capacity assumed in the base milk price for the 2012/13 year is materially aligned to Fonterra's current weighted average: the model assumes average WMP and SMP processing capacity of 1.97 million litres per day, compared to Fonterra's average of 1.94 million litres per day for its WMP and SMP plants.

[9] Fonterra's reasons paper in respect of the 2012/13 Milk Price Manual, 31 August 2012, p.2.

Foreign exchange conversion rates

Section 150B(c) provides that the base milk price may reflect an assumption "that gains and losses experienced by [Fonterra] resulting from foreign currency fluctuations, including from [Fonterra's] risk-management strategies, are incorporated in the base milk price."

The relevant provision in the Milk Price Manual is contained in Rule 11 of Part B, which provides that:

> The process for converting USD revenue in respect of a Season to NZD shall reflect the following process:
>
> - Farmgate Milk Price USD Receipts for each month will be calculated by reference to Farmgate Milk Price US Dollar Commodity Revenue and Farmgate Milk Price Revenue Days
> - Farmgate Milk Price NZD Receipts for the month will be calculated by multiplying Farmgate Milk Price USD Receipts by the Benchmark FX Conversion Rate for the month.
>
> The Benchmark FX Conversion Rate for a month is the average rate at which Fonterra actually converts net receipts denominated in any currency other than NZD to NZD in the month, specified as a ratio of USD to NZD and calculated with regard to all costs and benefits of Fonterra's hedging activities in respect of amounts converted in that month.

We explain in section 6 below that this process will generally result in a difference between the quantum of foreign currency gains and losses assumed over the course of a year in the calculation of the base milk price, compared to Fonterra's actual gains and losses over the same period. Despite these differences, our view is that the approach used to calculate the base milk price foreign currency conversion rate is nonetheless consistent with section 150B(c). In particular, we note that this process results in the milk price being calculated 'as if' the NMPB had applied Fonterra's foreign currency risk-management policies, but in respect of the NMPB's, rather than Fonterra's, forecast monthly USD-equivalent foreign exchange exposure, and 'as if' any inaccuracies in the NMPB's forecasts were proportionately equivalent to any inaccuracies in Fonterra's actual forecasts.

Conversion of all milk collected by Fonterra at practically feasible yields

Section 150B(d) provides that the base milk price may reflect an assumption "that all milk collected by [Fonterra] is processed into commodities at yields that are practically feasible."

The relevant provisions in the Milk Price Manual are contained in:

- Rule 11 of Part B, which provides that the milk price calculation "will reflect all milk collected by Fonterra in New Zealand, including milk sold to third party processors in accordance with DIRA."
- Rule 7 of Part B, which provides that milk price production volumes "will be calculated to utilise all milk supply ... given the product yields established under Rule 8.
- Rule 8 of Part B, which provides (in conjunction with the relevant definitions in Part C) that the yield assumptions must be calculated by reference to supportable assumptions with respect to product specification, including the relevant Codex requirements, and manufacturing losses.

We confirm that the base milk price calculation has been calculated under the assumptions that:

- All milk collected by Fonterra in New Zealand is converted into RCPs.
- The yields assumed in the conversion of milk into RCPs are practically feasible.

We further note that:

- Assurance with respect to the accuracy of the relevant inputs into the base milk price calculation (e.g. confirmation that milk volumes and composition assumed in the calculation reconcile to the relevant actual Fonterra data) is obtained in the course of the assurance process outlined in section 3 above.
- We comment further on the 'practical feasibility' of the yield assumptions in section 5 below.

6 Revenue

Relevant DIRA and Milk Price Manual provisions

The Milk Price Manual rules governing the calculation of revenue inputs into the base milk price calculation are contained in Rules 7 – 11 of Part B, and in the various definitions included in section 1.2 of Part C of the Manual. The relevant provisions of subpart 5A of DIRA are contained in:

- Section 150C(1)(a), which provides that "revenue taken into account in calculating the base milk price [must be] determined from prices of a portfolio of commodities at the times that those commodities are contracted to be sold by [Fonterra]."
- Sub-sections 150B(c) and (d), which allow for the use of Fonterra's actual foreign exchange conversion rates and for the conversion of raw milk to finished product at yields that are "practically feasible".
- Section 150C(2)(b), which further provides that relative proportions of each commodity must be determined by reference to relative profitability, Fonterra's physical manufacturing capacity, and the need to utilise all components of available raw milk. (Note that we have interpreted 'Fonterra's' capacity in this provision to in fact refer to the assumed capacity of the NMPB.)

Overview of revenue calculation

The steps below provide an overview of the process used to determine total New Zealand dollar revenue in the milk price model:

Step 1: Given the volume and composition of milk supplied in each month, supportable assumptions with respect to 'yields', and Fonterra's actual allocation of milk into the four milk price product streams (WMP/Butter/BMP, WMP/AMF/BMP, SMP/Butter/BMP and SMP/AMF/BMP), determine milk price model production of each RCP in each month (Product mix and volumes).

Step 2: Map milk price model production onto assumed month of sale by reference to Fonterra's forecast sales plan. As the year progresses, 'lock down' the sales volumes for completed ('year to date') months (Sales phasings).

Step 3: Determine average selling prices for each RCP and for each month, reflecting prices actually achieved by Fonterra for commodity product shipped in the month and sold on current, arm's length terms (Average BCPs).

Step 4: Based on supportable assumptions with respect to sales terms, determine the quantum of notional USD cash receipted in each month, and use Fonterra's actual average USD : NZD conversion rates for the relevant month to convert the notional USD receipts to NZD. (Foreign exchange conversion).

The following sections provide further detail on the assumptions adopted, and inputs and processes used, in respect of each of these steps, and our comments on the consistency of these with section 150A.

Product mix and volumes

The table below sets out the inputs, assumptions and processes used to determine notional production volumes and product mix in the milk price model:

Inputs	Process	Assumptions
Milk supply: Fonterra's total milk supply by month & average composition (fat, protein, lactose & minerals) by month.	Extracted from relevant Fonterra system (Aspire).	Use of all Fonterra's milk supply aligns to both Manual & to DIRA. Aggregation of data on monthly basis aligns to use of monthly averages thoughout model.

Inputs	Process	Assumptions
Production mix: allocation of milk to SMP and WMP production, and of cream to AMF and Butter production, is aligned to Fonterra's actual allocation.	Calculated by reference to Fonterra's actual production for each month in the season. (Relevant calculation results in alignment of Fonterra's and the NMPB's ratios of WMP MT : (WMP MT + SMP MT), and of Butter MT : (Butter MT + AMF MT)for each month in the season.)	That Fonterra's product mix decisions are optimal, given information available at time decision is made. That use of Fonterra's actual product mix does not create any adverse incentives, and is therefore consistent with the efficiency criterion.
Production volumes (given product mix): 1. Fonterra's product specifications (principally minimum protein, minimum lactose, maximum moisture content) for each RCP.	Extracted from relevant Fonterra system (PSLM).	The base calculations (for both yields and costs) assume all product manufactured is 'standard' or 'base' specification product. The model in fact includes prices achieved on the sale of a range of specifications defined to be 'base commodity' products (differences may be as minor as customer-specific bags, or additional tests may be performed due to market-specific requirements, and the additional cost recovered from the customer). The incremental costs (including the cost of any incremental fat, protein or lactose, valued at a price consistent with the base milk price) relative to base specification costs and yields are determined as part of the revenue calculation.
2. Provisions for milk lost in the manufacturing process.	Provisions for losses established by independent expert (T Gandell) having regard to: - results from loss audits of relevant Fonterra plants (subject to separate independent expert review by Aurecon), and - manufacturer guarantees. The loss provision covers: - Losses in milk reception, treatment & standardisation. - Effluent losses. - Stack losses. - 'Overweight' losses in the course of packaging.	That provisions adequately reflect expected losses that would be incurred by an efficient manufacturer of RCPs from all relevant sources over course of a full season, having regard to assumed technology & efficient operating model.
3. Provision for actual usage of value components in excess of minimum allowed usage ('specification offsets').	Provisions for specification offsets established by independent expert (T Gandell) having regard to actual Fonterra performance for relevant plants and products.	That provisions are appropriate, having regard to Fonterra data on probability of failing relevant Codex tests & given nature of assumed technology, including A&PC technology & capability.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

1. Milk supply: use of Fonterra's actual milk supply is a safe harbour assumption.

2. The production mix:

- Because the product mix is determined on a prospective basis, it is not possible to 'over-optimise' this input, so it follows that this input is necessarily practically feasible.
- This approach results in the consequences of any 'poor' decisions in respect of allocation of milk to WMP and SMP, and cream to Butter and AMF, flowing to the Milk Price, and therefore it does not provide a strong incentive on Fonterra to operate efficiently with respect to its allocation of milk to the relevant product streams. The approach does not adversely affect Fonterra's incentives with respect to the allocation of milk between other, non-milk price, product streams. We have previously examined potential alternatives to using Fonterra's actual mix, and have concluded that if the MPG were to establish an alternative 'benchmark' product mix rather than rely on Fonterra's allocation decisions, it would arguably be necessary for the MPG to maintain independent capability to forecast prices and monitor global demand and supply conditions, and that it is unlikely that the associated additional cost would be warranted.

3. Production losses:

- The practical feasibility of the production losses assumed in the model is supported by the results obtained from Fonterra's detailed testing (the results of which have been separately provided to the Commission) and by expert input.
- The assumption with respect to yields is a 'safe harbour' assumption, but we note that because Fonterra's actual performance with respect to yields does not directly flow through into the base milk price calculation, Fonterra is appropriately incentivised to minimise yield losses.

4. Specification offsets:

- The practical feasibility of the specification offsets assumed in the base milk price calculation is supported by detailed analysis of Fonterra's actual performance, details of which have been provided to the Commission. We note that this is an area where Fonterra has over time invested considerable capital (which is appropriately provided for in the milk price) and built up considerable expertise, so we accept it is possible that Fonterra achieves tighter offsets than those achieved by other processors in New Zealand. However, any advantage achieved by Fonterra does not involve the application of proprietary intellectual property, and is therefore potentially replicable by other processors.
- While the assumption with respect to yields is a 'safe harbour' assumption, we note that the specification offsets assumed are independent of Fonterra's actual current year performance, and therefore appropriately incentivise Fonterra to minimise the extent to which valued component usage exceeds stated minimum levels for the relevant products.
- The Commission noted in its Dry Run Report that the 'typical compositions' set out in the GDT specification for WMP imply higher protein and fat content than the average content assumed in the base milk price calculation (which equals the specification minimum protein and fat content, plus the allowances for specification offsets). [10] A view has been expressed to the effect that the Commission's observation implies that there is an inconsistency between the average fat and protein content of product sold on GDT, and the average fat and protein content assumed in the base milk price calculation, and that this supposed inconsistency means that it is not appropriate to assume the NMPB would be able to achieve GDT-equivalent prices. We confirm that there is in fact no material difference between the fat and protein content of product sold on GDT and the product assumed to be manufactured by the NMPB, and have provided detailed data in support of our position to the Commission.

[10] Commerce Commission, Report on the Dry Run Review, paragraph A5.22.

Sales phasings

The table below sets out the inputs, assumptions and processes used to determine the volume (in metric tonnes) of each RCP assumed to be sold in each month.

Inputs	Process	Assumptions
The percentage of each RCP manufactured by Fonterra from current season milk that is sold in each month.	1. A 'first in, first out' (FIFO) assumption is used to determine which of Fonterra's sales of each RCP can be deemed to be of product manufactured from current season milk. 2. As each month in the season progresses, year to date volumes deemed to have been sold by the NMPB are 'locked down', to avoid subsequent revisions to forecast milk supply, product mix or sales plans having any impact on the volume of product assumed to have already been sold.	That use of Fonterra's actual sales phasings does not create any adverse incentives. That any feasible alternative would reduce Fonterra's incentives to operate efficiently.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing the sales phasings inputs:

- The sales phasings reflect Fonterra's actual phasing of sales, and are therefore practically feasible. We note, however, that Fonterra's ability to sell its production is constrained at certain periods (particularly around the peak supply months of October and November) due to logistical constraints on shipping the volume of product manufactured by Fonterra at those times. This effective diseconomy of scale means Fonterra necessarily faces material additional storage and working capital costs that a smaller processor could choose not to be exposed to, and means Fonterra has a more restricted ability to take advantage of short-term favourable commodity prices than smaller processors. Use of Fonterra's sales phasings means these scale diseconomies are reflected in the base milk price calculation.
- We accept that use of Fonterra's actual sales phasings potentially means Fonterra faces a reduced incentive to optimally phase its sales, at least of the RCPs, relative to using an independent set of phasings. However, we have previously noted, and continue to believe, that there are considerable disadvantages to any alternative approach. The Commission suggested in its Dry Run Report, for example, two alternative approaches, one involving linking sales to production with say a two or three month lag, and the other involving use of a profile based on phasings achieved by Fonterra in prior years. We consider that both approaches would be problematic:
    - Under any notional approach, management would be incentivised to align actual sales phasings to the model benchmarks in circumstances where they did not see clear opportunities to outperform the benchmark, effectively resulting in the model driving real business decisions.
    - Use of a simple lag to production would imply, per the first bullet point above, shipment of volumes of finished product in some months in excess of logistically-feasible limits. This would necessarily imply a disconnect between the phasings assumed in the base milk price and Fonterra's actual phasings, creating additional volatility in both the base milk price and Fonterra's earnings.

Average BCPs

The table below sets out the inputs, assumptions and processes used to determine the monthly average USD selling prices assumed in the milk price model:

Inputs	Process	Assumptions
Prices Monthly average 'include series' prices, on a FAS-equivalent basis, for each RCP, separately calculated as averages for sales contracted in each of months 1 – 5 prior to the relevant shipment month. Include-series prices comprise: 1. Average across all Fonterra's GDT sales of NZ product for WMP, SMP & AMF. 2. For Butter & BMP, all prices achieved on GDT, plus all prices achieved for sales which are transacted on arm's length terms to parties independent of Fonterra, and at prices that reflect prevailing market prices at the time the contract for sale is entered into. 3. Prices for 'include' products that are not the standard specification products are adjusted for any incremental costs (relative to standard specification product) of manufacturing the product.	The relevant prices are determined using the following process: Step 1: Separate sales recognised in the month into sales contracted in each of months 1 - 5 prior to the month of sale. Step 2: Calculate the volume-weighted average price for the sales allocated to each of months 1 - 5 prior to the month of sale ('contract month' average prices).	That (primarily) GDT prices represent an unbiased estimate of the prices achievable for standard specification commodity product. That using GDT prices appropriately incentivises Fonterra management to maximise prices achieved for off-GDT sales. That governance arrangements in place to ensure credibility of GDT to its customers are sufficient to address concerns raised by others that Fonterra might manipulate volumes offered on GDT for the purpose of altering the milk price.
Contract month weightings Fonterra's contract profiles for sales contracted 1 - 5 months prior to shipment) for arm's length sales satisfying the 'Volume Criteria' specified in the Part C definition of Benchmark Selling Price are used to determine weighted average shipment month prices.	Determine percentage of 'volume include sales' (by MT) contracted in each of months 1 - 5 prior to shipment month. Apply these percentages to the contract month average prices determined above, to calculate the overall weighted average price to be applied to Milk Price sales of the relevant product in that month.	That Fonterra's overall contract profile for arm's length commodity sales, rather than just the GDT contract profile, is appropriate.
Downgrade Assumptions regarding: (a) % of product assumed to fall in each of the 3 'downgrade' categories (rework, stockfood and placement specifications), & (b) associated costs (relative to counterfactual of product not being downgrade), comprising discounts to 'good product' selling price for placement specifications and stockfood, and additional manufacturing costs for rework.	Established by reference to actual Fonterra performance over the period F09 - F11, and held constant for period F13 - F16. Established by reference to actual Fonterra costs, and updated regularly. (Do not however equal current year Fonterra costs.)	Use of a benchmark that is independent of actual current-year performance provides an appropriate performance incentive, since actual deviations from the benchmark will accrue as gains / losses to earnings. Benchmark is independent of current Fonterra performance, and therefore incentivises efficient performance.

Inputs	Process	Assumptions
Ocean freight recoveries Fonterra's average ocean freight cost for Milk Price products. Fonterra's average ocean freight recovery from customers for Milk Price products.	Deduct average ocean freight cost per MT from average on-charge to customer per MT, and multiply by total Milk Price production.	That ocean freight recovery is achievable, in addition to the FAS price, by an efficient processor of Fonterra's scale.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

1. Prices:

- The prices incorporated in the calculation of the weighted average monthly BCPs used in the base milk price calculation predominantly reflect prices achieved by Fonterra on the sale of product on GDT. In particular, in the forecast base milk price as at 31 May 2013, 90% of assumed NMPB revenue was derived directly from prices achieved on GDT. The remaining 10% of revenue derived from prices not achieved on GDT is in respect of Butter and BMP. Butter was only introduced onto GDT in February 2013, and BMP (which is only manufactured in small volumes by Fonterra) was only sold on GDT in respect of 24 of the 65 GDT trading events and contract tenor combinations relevant to the calculation of the 2012/13 base milk price.[11]
- Because these prices are derived from prices actually achieved by Fonterra on GDT, they are practically feasible for Fonterra. We have separately provided the Commission with considerable data and analysis that demonstrates that the prices achieved on GDT are not systematically higher than the prices achieved by Fonterra on off-GDT sales, and that they are also not systematically higher than prices achieved by other NZ producers.
- Placing primary reliance on prices achieved on GDT appropriately incentivises Fonterra to (a) seek to maximise prices achieved off-GDT, and (b) make efficient choices between sales channels.

2. Contract month weightings:

- The contract month weightings draw on Fonterra's actual contract profile, and are therefore practically feasible.
- Use of Fonterra's overall contract profile for sales of the RCPs contracted on an arm's length basis at current prices means that Fonterra's choices between sales channels are driven solely by an assessment of which channel will deliver the highest net price, and is therefore consistent with the efficiency criterion. (The most obvious alternative approaches would likely drive inefficient decisions: use of an independently-determined set of contract month weights may incentivise Fonterra to 'manage to the model' so as to avoid earnings volatility, while use of just the GDT contract month weightings could result in inefficient decisions regarding the choice of sales channel (e.g. Fonterra might choose to sell product on GDT even where this would not maximise revenue, so as to better align GDT contract month weightings with off-GDT contract month weightings).

3. Downgrade:

- The assumptions in respect of both the percentage of product falling into each downgrade category and the associated costs are derived from an assessment of Fonterra's recent historic performance, and are therefore practically feasible.

[11] The sales phasings in the base milk price result in BMP sales being allocated to the 13 months from August 2012 to August 2013 inclusive. The approach described below with respect to the weighting of contract month prices means that separate prices are used for sales contracted in each of months 1 – 5 prior to shipment. Consequently, the base milk price calculation uses 13 x 5 = 65 separate pricing observations to derive total assumed BMP revenue.

- The assumptions do not result in the pass-through to the base milk price of Fonterra's actual current-year performance, and are therefore consistent with the efficiency criterion.

4. Ocean freight recovery:

- As noted above, any differences between Fonterra's actual ocean freight costs per MT and the amounts charged to Fonterra's customers are included in the base milk price. The rationale is that in the course of comparing the price of Fonterra product to prices available from alternative sources of supply, customers will factor in differences in ocean freight rates (along with charges for any other 'add ons' in addition to the FAS price). It is therefore reasonable to assume that on average, any margins over cost of ocean freight will be impounded in lower FAS prices. The relevant margin reflects actual Fonterra recoveries, and is therefore practically feasible for Fonterra.
- Ocean freight recoveries are calculated with respect to Fonterra's average current year margins, and it might at first sight appear that this approach leaves Fonterra with a weakened incentive to minimise its negotiated rates for ocean freight. However, if Fonterra were to pay 'too much' for ocean freight, it would receive lower net prices for its non-milk price products, which would in turn result in lower earnings. We therefore do not consider this input to be inconsistent with the efficiency criterion.

Foreign exchange conversion

The table below sets out the inputs, assumptions and processes used to determine the monthly USD : NZD foreign exchange conversion rates used in the milk price model:

Inputs	Process	Assumptions
Fonterra's actualUSD-equivalent net cash receipts in the relevant month Fonterra's net NZD receipts, after allowing for (a) conversion from USD at spot and (b) net proceeds of hedging contracts (forwards & other) exercised in the month.	Calculated as the ratio of Fonterra net USD-equivalent receipts for the month to (a) net NZD receipts, at spot and (b) proceeds from FX contracts exercised in the month less any costs (e.g. option premia) of those contracts. Calculated costs include the holding costs (calculated at the pre-tax milk price WACC) for the period between acquisition and exercise or expiry of options.	That application of Fonterra's average FACR for the month to the calculated Milk Price USD cash receipts in the month (which will differ from Fonterra's) is consistent with s150B(d).

The 'benchmark FX conversion rate', the average USD : NZD conversion rate applied to convert notional milk price receipts for a month, is calculated through the following steps:

1. Converting all Fonterra's USD-equivalent receipts to NZD at the daily average spot exchange rate for the month.
2. Adding (subtracting) to the NZD receipts the gains (losses) on foreign exchange contracts exercised by Fonterra in the month.
3. Subtracting (adding) from the NZD receipts premiums paid (received) in respect of any options for foreign exchange that are exercised or which expire in the month.
4. Subtracting (adding) from the NZD receipts a provision for interest on option premiums in respect of options exercised or expired in the month for the period elapsed since the acquisition (sale) of the option.
5. Dividing the USD receipts by the adjusted NZD receipts obtained through steps 1 – 4, to derive Fonterra's 'benchmark FX conversion rate.' The resulting series of monthly benchmark rates is then used to convert the notional net USD cash receipts of the NMPB to NZD.

This approach effectively assumes the NMPB applies Fonterra's foreign exchange hedging policy in exactly the same manner as Fonterra does, from which it follows that the assumed conversion rates are practically feasible. While use of Fonterra's average conversion rates is a safe harbour assumption, we also note that Fonterra on average converts a higher quantum of USD-equivalent receipts to NZD (in respect, for example, of Fonterra's offshore subsidiary

operations) and is therefore appropriately incentivised to efficiently manage its foreign exchange risk management activities.

7 Cash costs

Relevant DIRA and Milk Price Manual provisions

The Milk Price Manual rules governing the calculation of the various cash costs assumed in the base milk price calculation are contained in Rules 12 - 23 of Part B, and in the various definitions included in section 1.3 of Part C of the Manual. The relevant provisions of subpart 5A of DIRA are contained in section 150C(1)(b), which provides that the costs taken into account in calculating the base milk price must include the cost of collecting milk, processing that milk into the RCPs and of selling the RCPs.

Overview of calculation of cash costs

The base milk price reflects appropriate provisions for the full range of manufacturing and other costs that could reasonably be expected to be incurred by a manufacturer of the RCPs. These costs are categorised in this section under the following headings:

- Selling
- Lactose
- Collection
- Packaging
- Energy
- Cost of water, cleaning and CIP, consumables, effluent and laboratory testing
- Plant labour
- Repairs and maintenance
- Site overheads
- Inland freight
- Storage
- Other supply chain costs
- Administration and other overheads

Selling costs

The table below sets out the inputs, assumptions and processes used to determine the selling costs assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
GDT fee schedule. NMPB sales volumes. Estimated cost of maintaining 8 in-market hubs for customer service. Estimated cost of maintaining 4 in-country offices to support government procurement customers. Estimated cost of sales-related NZ costs not provided for elsewhere in the model (including IT, demurrage, L/C management and a provision for bad debts).	Determine aggregate direct GDT fee that would be payable by the NMPB if it sold 90% of its volume on GDT. (Remaining 10% assumed to be sold to government procurement customers.)	That NMPB would be able to participate on GDT and face same fee schedule as other third party sellers. That GDT prices are a reasonable proxy for the prices (net of any incremental costs) the NMPB would achieve on sales to government procurement agencies. That the provisions for in-market resourcing and for NZ sales-related costs are appropriate given the assumptions re volumes sold on GDT and volumes sold to government procurement customers.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- We have separately provided the Commission with the detail of the approach taken to establishing the quantum of the various items listed under the 'inputs' heading above, and consider that they include appropriate provisions for all relevant costs and that they are practically feasible.
- The assumption that the NMPB is a third party participant on GDT means that this component of the assumed selling costs is also practically feasible for a processor other than Fonterra (and also results in a higher assumed cost than the alternative approach of assuming the actual cost of operating GDT).
- The assumption that 10% of sales are to government procurement customers, and that these customers will on average pay a net price equivalent to the GDT price (meaning that the additional sales costs are assumed not to be recovered) is in our view conservative, and we have separately provided detailed information to the Commission in support of this view.
- While various elements of the selling costs provision are derived from actual Fonterra costs, the approach does not result in Fonterra's actual current year costs flowing directly to the milk price, and is therefore consistent with the efficiency criterion.

Lactose costs

The table below sets out the inputs, assumptions and processes used to determine the cost of added lactose assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
1. Price: lower of Fonterra's & other NZ processors' average landed monthly price, ex NZ Customs. 2. Quantity: - yield calculations - see above - loss allowance -- revised for F13, based on actual Fonterra data. 3. Transport Costs - CIF costs per Customs NZ data - inland transport costs per Fonterra contracted rates - payable days per analysis of typical contract terms, shipping days & holding days (revised for F13). 4. Procurement costs - reasonable allowance calculated by reference to Fonterra actuals. 5. Storage and other holding & handling costs - provision for storage capacity included in capital base - reasonable provisions for other costs calculated by reference to Fonterra actuals.	Step 1: For each month in the season, calculate the volume-weighted average price reported to NZ Customs by (a) Fonterra and (b) other NZ processors, in respect of lactose landed in months 2,3 and 4 prior to the relevant month. Step 2: Calculate the weighted average of the two price series determined under Step 1 over the 12 month season. Step 3: Apply to the milk price calculation whichever of the series calculated under Step 1 generates the lower average price for the season under Step 2. (The same approach is also used to determine lactose ocean freight and other import costs from each source country, with the lower series of freight costs over the course of the season used in the milk price calculation.)	That approach appropriately incentivises efficient lactose procurement by Fonterra, inasmuch as any adverse difference between Fonterra's costs & the average cost reported by other New Zealand processors would fall to earnings. That approach captures all lactose-related costs.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The use of actual costs for lactose landed in New Zealand necessarily implies the assumptions are practically feasible.
- Averaging over 12 month period is in our view sufficient to capture the impact of any differences in, for example, the average lag between contracting lactose and it landing in New Zealand for Fonterra relative to other processors.
- Volume assumptions are an output of the yields calculations, and will be practically feasible so long as the yields are calculated correctly, and so long as the assumption for losses is supportable, which we consider to be the case.

Collection costs

The table below sets out the inputs, assumptions and processes used to determine the collection costs assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Fonterra's actual cash collection costs, excluding Fonterra's actual inter-factory diversion costs. Modelled inter-factory diversion costs, based on calculated volumes of cream & buttermilk to be transported between sites, given asset footprint & product mix.	Diversion costs modelled by reference to assumed product mix (& therefore surplus cream / buttermilk) at each site, average transport cost per km, & for sites without cream or buttermilk processing capacity, the assumed km between site & designated site with relevant capacity.	That it is not feasible to cost-effectively independently model the 'volume' drivers of Fonterra's collection costs (primarily kms travelled & average kms travelled per hour). That Fonterra's unit costs (eg driver wages) are reasonably representative of the unit costs that would be incurred by an efficient processor. That differences between actual & Milk Price product mix (which can in practice result in milk not being delivered to the nearest site in the shoulders of the season, in circumstances where the Milk Price model would probably deliver to the nearest site) are not material.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- Use of actual costs, which are incurred by Fonterra in respect of the same total volume of milk assumed to be collected by the NMPB, means the assumed costs are practically feasible for Fonterra. (As noted below, we do not consider the potential for 'over optimisation' previously raised by the Commission impacts on the practical feasibility of the collection cost assumption.)
- Use of actual costs also means that the approach does not provide a strong incentive for Fonterra to minimise collection costs. However, as we have previously advised, we do not consider it to be practicable to independently model the collection costs of the NMPB at a sufficiently detailed level to be able to generate a materially reasonable estimate of costs.
- We note that we model inter-site product diversion costs on a basis that is independent of Fonterra's actual costs, which are significant, and that the approach therefore does appropriately incentivise efficiencies in this respect.

In its Dry Run Report, the Commission noted that:[12]

> As standard plants are only added in whole numbers to meet peak milk supply requirements at the level of the two defined regions, rather than to specific manufacturing sites, the incremental number of standard plants is implicitly optimised for each island. Unless the relevant operating costs (eg, actual collection costs) have been appropriately adjusted upwards to reflect this implicit optimisation, this approach may not be consistent with the milk price purpose statement. Fonterra's submission on the draft report notes that they do not consider that

[12] Manual Report, p.105, paragraph 12.48.

> 'optimisation' at the level of the North Island and South Island could be interpreted to imply 'over optimisation'. However, the Fonterra submission does not directly address whether any relevant operating costs (eg actual collection costs) need to be adjusted, to ensure internal consistency.

The Commission subsequently noted in its Manual Report (on p.18) noted that it remained "concerned that there could be potential inconsistency between the approach for setting the number and location of standard plants, and the data used for the calculation of collection and other relevant operating costs," and that it would consider this matter further in its review of the base milk price. Our position on this issue remains unchanged from the view we expressed in our submission on the Commission's draft Manual Report, in which we noted the following:[13]

> As previously noted, we believe the approach taken to determining incremental processing capacity requirements in the model materially mirrors the approach actually taken by Fonterra, and that it therefore does not result in any element of 'over-optimisation'. In particular:
>
> - The model assumes the same number (and location) of manufacturing sites as is actually maintained by Fonterra. This assumption is reflected in the model's allowances for site overhead costs and for site capital. The model also assumes that annual volumes of milk processed on each site are materially aligned to the volumes actually processed by Fonterra, implying that it is therefore internally consistent to use Fonterra's actual collection costs and site to port freight costs derived from Fonterra's actual costs.
> - We accept that an element of over-optimisation might occur if Fonterra's actual incremental plants had a materially smaller processing capacity than the Milk Price model's incremental plants. If this were the case Fonterra could, for example, add say two plants, each on a separate site, while the Milk Price model might have only added one plant, in which case the Milk Price model may not have been able to achieve Fonterra's incremental collection costs. In fact, the opposite situation has occurred in practice: since 2009, the Milk Price model has incorporated four incremental plants, each with a daily capacity of 1.95m litres, whereas Fonterra has installed two incremental plants, with approximate capacity of 4.5m litres and 2.4m litres respectively. It is therefore likely that the Milk Price model could have achieved lower incremental collection costs than those actually achieved by Fonterra (and therefore reflected in the Milk Price), though the difference will not have been material.

Packaging costs

The table below sets out the inputs, assumptions and processes used to determine the packaging costs assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Fonterra's actual average unit packaging costs for relevant packaging materials. Fonterra's calculated packaging usages per MT of finished product (excluding wastage). A provision derived from Fonterra's budgeted provisions for wastage of each packaging item per MT of finished product.	Modelled as fully variable, as units of usage (including wastage allowance) per MT multiplied by cost per unit, & then by MT.	That Fonterra's budgeted wastage levels reasonably reflect the losses that would be incurred by an efficient processor (including that Fonterra does not have any procurement advantages not available to other industry participants of similar scale). That Fonterra's unit costs reasonably reflect the costs that would be incurred by an efficient processor.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- Both the unit cost and unit usage (including wastage) assumptions are derived from Fonterra actuals, and are therefore practically feasible for Fonterra. We do not consider Fonterra has any procurement or

[13] Fonterra's submission on the Commission's draft report on the 2012/12 Milk Price Manual, 15 November 2012, pp.5-6.

technological advantages not available to other processors of similar scale, and therefore believe these assumptions to be practically feasible for other processors.

- Use of Fonterra's actual unit costs for packaging inputs arguably weakens the incentives on Fonterra minimise the relevant costs, but we note that:
  a) the packaging inputs used to establish the costs assumed in the base milk price calculation comprise a subset of the full range of packaging inputs used by Fonterra, and Fonterra still faces appropriate incentives to minimise the cost of inputs not referenced in the base milk price calculation, and
  b) suppliers of packaging inputs referenced in the base milk price calculation generally also supply packaging inputs not used in the calculation, and we have not observed any systematic increase in the price of milk price-related inputs relative to other packaging inputs over time (as would have been observed had Fonterra not been as pro-active in minimising the cost of milk price-related inputs).

Energy costs

The table below sets out the inputs, assumptions and processes used to determine the energy costs assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Fonterra's budgeted average unit energy costs for: - electricity - gas - coal - steam Manufacturer's specifications for energy usage per MT of finished product. Fonterra's contracted emission rate Market price for carbon units	Using Fonterra's budget energy costs for energy (excluding fixed transmission, R&M, depreciation and ETS costs, but including labour) calculated average $/kwh and $/MT of steam. These rates are applied to the manufacturer's specifications for energy usage per MT of finished product (adjusted for on site losses) to arrive at a $/MT of energy cost for each RCP, which is applied to production to calculate the cost to the Milk Price business. ETS costs are calculated using the carbon emission amount specified in Fonterra's energy provider's contracts, the amount of energy consumed by the Milk Price business and the average spot price for emission units in the month the energy is consumed.	Fonterra's energy budget is representative of actual costs and usage. That the energy consumption profile between sites within the Fonterra business is materially similar to the Milk Price business. That Fonterra's energy rates are representative of rates that would be paid by an efficient processor.
Fonterra's prior year actual peak energy load by site for gas and electricity and Fonterra's budget costs for electricity and gas transmission. Manufacturer's specifications for peak energy consumption. Peak milk supply for the NMPB.	Peak energy demand for the NMPB is calculated with reference to the manufacturer's specified peak energy requirements and peak milk. Peak energy requirements are applied to Fonterra's budget average peak energy cost rate to arrive at a fixed cost for gas and electricity transmission costs.	Gas and electricity transmission costs are the only material fixed cost in energy provision. That Fonterra's budget peak energy cost rate is representative of actual costs and rates an efficient processor would pay.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The unit cost assumptions along with the provisions for transmission charges represent budgeted estimates of the average prices expected to be paid by Fonterra, and are therefore practically feasible for Fonterra. The energy usage assumptions reflect manufacturer's specifications, and have been subject to expert review. We therefore consider them to be practically feasible for Fonterra. We do not consider Fonterra has any procurement advantages with respect to energy costs that are not available to other processors of similar scale, and therefore also believe these assumptions are practically feasible for other processors.
- The approach taken to establishing unit energy cost assumptions does not result in Fonterra's actual current year prices being passed through into the base milk price, with any under or over-performance relative to

budget going to earnings, and the energy usage assumptions are established independently of Fonterra's actual usage. Fonterra is therefore appropriately incentivised to minimise both its energy usage and its unit energy costs.

Costs of water, cleaning and CIP, consumables, effluent and laboratory testing

The table below sets out the inputs, assumptions and processes used to determine allowances in respect of the cost of water, cleaning and CIP, consumables, effluent and laboratory testing assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
The allocated cost per MT for water, cleaning & CIP, consumables, effluent and laboratory testing, sourced from Fonterra's product costing system.	Multiply allocated cost per MT by total MT of each RCP.	That the relevant costs materially vary with production volumes. Fonterra's cost allocation system generates materially supportable cost allocations.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- Because the allocated costs are not updated in the base milk price calculation for Fonterra's actual current year costs, this approach is consistent with the efficiency criterion.
- We have separately provided the Commission with analysis that confirms that the relevant cost allocations materially reconcile to the costs actually incurred by Fonterra, and that the allocation methodology is reasonable. We therefore consider the calculated costs are practically feasible.

Direct manufacturing wages and employee-related expenses

The table below sets out the inputs, assumptions and processes used to determine allowances in respect of the cost (including on-costs) of plant labour in the calculation of the base milk price:

Inputs	Process	Assumptions
Numbers of each type of standard plant. Staffing requirements, by level, for each standard plant type. Fonterra's average DWU rate for FTEs at each level. Fonterra's average usage of temporary labour as percentage of total labour requirements. Fonterra's average 'regular' overtime %. Fonterra's average employee-related expenses, as a % of base wage / salary rates.	Calculate total wage cost for each standard plant type as FTEs at each level multiplied by average annual wage / salary rate. Add loading for employee-related expenses. Multiply through by plant numbers.	That Fonterra's labour rates are representative of the rates that would be paid by an efficient processor.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The unit cost assumption reflects Fonterra's actual average cost (given staffing level) for plant labour. Plant labour requirements were established through a process of independent review, and we have separately provided data to the Commission that demonstrates that the assumed staffing numbers materially align to

the numbers actually utilised by Fonterra in plants comparable to those assumed in the base milk price calculation. These assumptions are therefore practically feasible for both Fonterra and for any other processor using similar manufacturing plant.

- Staffing levels are established by reference to, but independently of, Fonterra's actual staffing levels, and therefore satisfy the efficiency criterion. Unit staff costs reflect actual Fonterra costs, but the base milk price calculation assumes materially fewer plant labour FTEs than are actually engaged by Fonterra. Consequently, any savings in unit costs by Fonterra will result in higher earnings, and Fonterra is therefore appropriately incentivised to minimise unit plant labour costs.

Repairs and maintenance costs

The table below sets out the inputs, assumptions and processes used to determine allowances in respect of costs associated with the repair and maintenance of the fixed assets assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Fonterra's average R&M spend as % of total replacement cost of Fonterra's fixed assets for its manufacturing sites over the period F09 – F12. Total replacement cost of Milk Price asset base. (In both cases excluding collection assets & R&M.)	Calculate Fonterra's average R&M spend as % of asset replacement cost to replacement cost of equivalent Milk Price assets over the period F09 – F12. Apply the average ratio to the replacement cost of the relevant NMPB assets, to derive the Milk Price R&M provision.	That there are not material differences in average R&M spend, as a percentage of replacement cost, across (a) milk price vs non-milk price assets, & (b) across assets older than those included in the Milk Price asset base vs assets with lives equivalent to those included in the Milk Price asset base. That the assumed level of R&M spend is consistent with the revised assumption that no 'birthday capex' allowance is required.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The provision for repairs and maintenance costs has been established by reference to Fonterra's actual costs. While Fonterra's actual costs are in respect of a different profile of assets, we have undertaken considerable analysis to determine whether there are any systematic differences in average maintenance costs, as a percentage of replacement cost, for milk price vs non-milk price assets, and have concluded that, given Fonterra's asset maintenance policies, there is not. We therefore consider the assumed quantum of repairs and maintenance costs to be practically feasible.
- The provision for R&M is established independently of both Fonterra's actual current year R&M cost, and of Fonterra's actual current year R&M spend as a percentage of the replacement cost of Fonterra's manufacturing assets, and is therefore consistent with the efficiency criterion.
- Prior to the current season, we included in the milk price asset base a provision for 'birthday capital expenditure', calculated as an estimate of the present value of costs that could reasonably be expected to be incurred in a major refurbishment part way through the economic life of each major asset. When the current milk price methodology was implemented in 2008, this assumption was broadly consistent with Fonterra's approach to asset management, and its incorporation in the Milk Price was therefore consistent with use of a provision for R&M costs derived from Fonterra's actual costs. In the intervening period, Fonterra has revised its asset management policies, and now focuses more on ongoing preventative maintenance, rather than one-off capital expenditures, to achieve target asset lives. Consequently, the assumption of 'birthday capex' has been discontinued in the 2012/13 season, and a higher provision for R&M expenditure included, so as to maintain ongoing consistency between the asset maintenance and R&M costs assumed in the Milk Price model with Fonterra's actual policy. The net impact of this change has been a slight increase in total costs assumed in the base milk price.

Site overhead costs

The table below sets out the inputs, assumptions and processes used to determine allowances in respect of site overhead costs assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Assignment of each site to 'large', 'medium' or 'small' category. FTE provisions for non-plant site labour (comprising site management, administrative staff, cleaners, maintenance of buildings and grounds, management of consumables stores). Fonterra's average direct and indirect costs for each category of labour.	Multiply FTEs in each category by relevant average direct and indirect costs.	That the staffing assumptions are appropriate given the range of activities assumed to be undertaken on each site.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The provision in respect of site overhead-related costs was established through a process of expert review, with Fonterra management input to ensure that all relevant costs were identified. The provision is in our view practically feasible, both for Fonterra and for other processors.
- Because the provision is set independently of the relevant Fonterra current year actual costs, it is consistent with the efficiency criterion.

Inland freight costs

The table below sets out the inputs, assumptions and processes used to determine allowances in respect of inland freight costs assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Modelled production volumes of each RCP at each site (established by reference to budget allocation of milk to site & budget product mix, but adjusted for actual milk supply & product mix). Fonterra's average contracted freight rate per MT of product from relevant site to relevant port.	Use calculated production of (a) dry product and (b) butter at each site to determine weighted average inland freight costs per MT for dry product and butter, respectively. Multiply total volumes of dry product and butter by weighted average freight rates to derive total inland freight cost for NMPB production. Multiply total volume of NMPB lactose NMPB by average inland freight rate per MT for dry product to derive inland freight cost for added lactose.	That Fonterra's contracted freight rates (with third party vendors) are achievable by any third party processor. That the NMPB would not be able to achieve discounts relative to Fonterra rates for the back-haul advantages involved in transporting the NMPB's lactose requirements.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The average freight costs assumed in the model reflect Fonterra's actual unit costs, and are therefore practically feasible for Fonterra. Fonterra outsources its inland freight requirements to independent contractors. Since we have no cause to believe Fonterra has any procurement advantages not available to other processors, we consider these costs are also practically feasible for other processors.

- Use of Fonterra's actual inland freight rates reduces the incentive on Fonterra to minimise the relevant costs. We note, however, that the rates are independently negotiated by DTL, the management of which is appropriately incentivised to maximise returns, and that Fonterra, through its part ownership of DTL, has visibility over any 'excess returns' that would arise if DTL were to 'over charge' Fonterra for inland freight.

Storage costs

The table below sets out the inputs, assumptions and processes used to determine allowances in respect of storage costs assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Dry Product ((WMP, SMP, BMP & AMF): Provision for capital costs. Assumed economic life of dry store assets. Storage space required per MT of each RCP. Provisions for relevant operating costs : Labour costs per FTE. FTE requirements per MT. Product write-off costs, vehicle costs & miscellaneous cost Butter: A provision for third party cool storage costs, based on Fonterra's contracted rates, covering cost per MT per month, plus load in / load out costs.	Dry Product ((WMP, SMP, BMP & AMF): Dry store capital requirements updated annually based on budget peak production volumes & lactose storage requirements, & with cost per square metre drawn from replacement cost valuation of relevant Fonterra assets. Operating costs all modelled as being fully variable with respect to finished product MT. Labour costs per MT calculated as product of FTE cost, FTE requirement per MT, & total MT of dry product Butter: Calculate load in / load out costs based on total NMPB Butter production. Calculate storage cost based on total NMPB Butter production and average months in storage, calculated by reference to production and sales profile for Butter.	That all relevant costs materially vary with MTs stored / handled. That sample of Fonterra data used is representative of costs an efficient processor would incur.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- Dry store capital costs are based on inputs provided by independent experts, and are comparable with costs recently incurred by Fonterra in installing the new dry stores at Darfield. Operating costs are also established by reference to actual Fonterra costs using appropriate expert input, and are therefore in our view practically feasible for Fonterra.
- The provision for cool store storage costs reflects actual arm's length costs incurred by Fonterra, and is therefore practically feasible, both for Fonterra and for other processors.
- Because the various storage-related provisions (other than the cool storage provision) is set independently of the relevant Fonterra current year actual costs, they are consistent with the efficiency criterion.

Other supply chain costs

The table below sets out the inputs, assumptions and processes used to determine allowances in respect of other supply chain costs assumed in the calculation of the base milk price:

Inputs	Process	Assumptions

Inputs	Process	Assumptions
Comprise specific fixed provisions for: Global supply chain management Global market access costs Documentation and customer services costs	Reset at 4 year review, and based on analysis of relevant Fonterra costs, with indexation to PPI in other years.	That the process results in all relevant costs being accounted for, and that the 4 yearly reset appropriately incentivises Fonterra to operate efficiently.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- These provisions were all established through a process of expert review, with Fonterra management input to ensure that all relevant costs were identified. The provisions are in our view practically feasible, both for Fonterra and for other processors.
- Because the provisions are set independently of the relevant Fonterra current year actual costs, they are consistent with the efficiency criterion.

Administration and other overhead costs

The base milk price calculation contains provisions for the costs of the wide range of activities of an administrative or overhead nature that would be undertaken by a commodity milkpowder manufacturer with the scale of the NMPB.

Inputs	Process	Assumptions
Provisions in respect of the costs of the various administrative and overhead functions of a large scale commodity processor, covering the range of activities identified in Attachment 1.	Established through an extensive 'review year' process, by reference to Fonterra's actual costs, and involving a review of all overhead costs incurred by Fonterra in New Zealand to determine the costs that would be relevant to a processor with the characteristics of the NMPB.	That the 'bottom up' process used to determine which of Fonterra's costs would be likely to be incurred by the NMPB means there is little possibility that any relevant category of costs would be omitted. That establishing the NMPB's costs by reference to Fonterra's actual costs does not result in a material overstatement of the relevant costs.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- As noted in Attachment 1, provisions have been included in this category for costs that are actually incurred by Fonterra, and which may be incurred by a commodity-only processor of Fonterra's scale, but which we anticipate would not be incurred by smaller processors. (Costs falling into this category, include expenditure by Fonterra of an industry good nature, such as providing policy input into the formulation of environmental and trade policy.)
- These provisions were all established through a process of expert review, with extensive Fonterra management input to ensure that all relevant costs were identified. The provisions are in our view practically feasible, both for Fonterra and for other processors.
- Because the provisions are set independently of the relevant Fonterra current year actual costs, they are consistent with the efficiency criterion.

8 Capital costs

Relevant DIRA and Milk Price Manual provisions

The Milk Price Manual rules governing the calculation of the various cash costs assumed in the base milk price calculation are contained in Rules 24 - 39 of Part B, and in the various definitions included in section 1.4 of Part C of the Manual. The relevant provisions of subpart 5A of DIRA are contained in:

- Section 150C(1)(b), which provides that the costs taken into account in calculating the base milk price must include the capital costs, including a return on capital, of collecting milk, processing that milk into the RCPs and of selling the RCPs.
- Sub-sections 150B(a) and (b), which provide for the assumptions that the NMPB may reflect Fonterra's national site footprint and the average processing capacity of Fonterra's plants for the manufacture of the RCPs.

Overview of calculation of capital costs

The steps below provide an overview of the process used to determine the cash costs assumed in the calculation of the base milk price:

Step 1: Determine the fixed assets required to collect the milk supplied to the NMPB, and to manufacture and store the RCPs manufactured by the NMPB.

Step 2: Determine an appropriate value for the cost of capital.

Step3: Determine an appropriate approach for spreading capital recoveries in respect of the fixed assets of the NMPB over time, and for otherwise fully recovering relevant capital costs.

Step 4: Determine an appropriate allowance for the company tax that would be paid by the NMPB.

Step 5: Determine an appropriate allowance for financing costs in respect of the net working capital balances implied by the NMPB's collection and sales profiles, and by other assumptions relevant to an assessment of the NPMB's net working capital requirements.

The following sections provide further detail on the assumptions adopted, and inputs and processes used, in respect of each of these steps, and our comments on the consistency of these with section 150A.

Fixed assets

The table below sets out the inputs, assumptions and processes used to determine the fixed assets required by the NMPB, and assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Manufacturers' 2008 quotations for construction of WMP & SMP plants. Manufacturers' 2011 quotations for construction of WMP, SMP, BMP, Butter & AMF plants. Detail of actual construction costs for Darfield site. DTZ assessment of: - economic lives & replacement cost valuations of (a) relevant Fonterra assets (comprising butter, AMF & BMP plants, ancillary site services & site	Determine incremental plant requirements on a forward-looking basis, having regard to forecast changes in milk supply in the North Island & South Island, respectively. Assume full replacement of each major plant component at the end of the component's economic life. 'Spreading back' over time of initial asset base, with effect (for example) that 1/30th of assets with an assumed economic life of 30 years were assumed to have been acquired in each of the previous 30 years.	That approach to determining incremental capacity requirements maintains alignment between milk price asset base & approach to setting relevant cost inputs, including collection costs. That economic life (& implied replacement cost) assumptions are reasonable, including with respect to historic and assumed future rate of technological change. That removal of any provision for 'birthday capex' is consistent with assumed level (& nature) of R&M spend. That there is no material difference between the Fonterra's actual milk collection assets & the

Inputs	Process	Assumptions
infrastructure assets - additional costs relevant to assessment of full replacement costs (consents, capitalised interest etc) - Jones Lang LaSalle assessment of inflation in replacement costs subsequent to 2008. Book values at 1 August 2012 of Fonterra's milk collection fixed assets.		assets required by the NMPB.
MWH scaling of DTZ valuations of ancillary assets to requirements of NMPB.		

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The various assumptions employed in constructing the NMPB's fixed asset base have been subject to considerable independent expert input and review, and we have obtained independent confirmation that that notional asset base is appropriately configured and is consistent with the manufacture of the reference commodity products. It is therefore in our view practically feasible.
- Because the asset base is established independently of Fonterra's actual fixed asset costs, it is consistent with the efficiency criterion.

Weighted average cost of capital

The table below sets out the inputs, assumptions and processes used to determine the weighted average cost of capital assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
5 year rolling average of monthly average 5 year government stock rates, as reported by RBNZ, adjusted for semi-annual coupon payments. 5 year average of average spread of 5 year A- rated debt issued by US industrials over US treasuries. Allowance for annualised debt issuance & other debt-related costs of 35 basis points. NZ company tax rate. Asset beta of 0.45. Assumption of tax-adjusted market risk premium of 7.0%. Assumption of debt : debt + equity ratio of 40%.	Use of the 'simplified Brennan-Lally' formula to convert inputs into WACC (7.4% for F13 Milk Price).	That the assumed asset beta appropriately reflects the systematic earnings risk to which the relevant portion of Fonterra's commodities and ingredients business is exposed, given the milk price methodology. That the approach to calculating WACC is appropriate. That use of 5 year rolling averages, rather than spot rates, does not leave Fonterra exposed to any incremental risk of not recovering its cost of capital over time on investments in assets equivalent to those assumed in the NMPB.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The use in the base milk price calculation of five year rolling average inputs in respect of the risk-free rate and debt premium results in the base milk price reasonably reflecting the capital costs faced by a processor which

followed a prudent process of rolling over a constant proportion of its capital requirements each year, and is materially consistent with Fonterra's actual risk management policies. More generally, the approach reasonably reflects the actual costs that would be faced by a processor with a similar credit rating to Fonterra's, and which had a debt profile with similar maturity and refinancing profile to that assumed in the base milk price calculation, and is therefore practically feasible.

- Relevant inputs are set independently of the corresponding Fonterra values, and are therefore consistent with the efficiency criterion.

Tilted annuity methodology

The table below sets out the inputs, assumptions and processes used to determine the weighted average cost of capital assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Outputs from process of establishing asset base (including spread-back over prior years) & WACC. Forecast of long-run rate of inflation in capital costs.	Use 'tilted annuity' formula to derive annuities in respect of assets (a) falling in each 'economic life' category & (b) for each assumed acquisition year. Decompose calculated annuities into implied depreciation & WACC components, with depreciation calculated as the change in present value of remaining annuities.	That this approach results in a stream of capital charges that over an asset's expected life fully recovers (a) the asset's initial cost & (b) an appropriate cost of capital on unrecovered capital costs. That the time profile of capital recoveries generated using this approach is reasonable.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- The tilted annuity approach results in total annual capital costs (comprising depreciation, the 'WACC charge, or return on capital, and taxation) increasing over time at approximately the same rate as the rate of increase in capital costs. Consequently, annual capital costs assumed in the model are largely independent of the assumed timing of investment in plants. Under the obvious alternative approaches, however, assumed annual capital costs would have varied considerably depending on the specific assumptions made regarding the timing of investment decisions, and it would be difficult to make the case that any particular set of assumptions was 'correct'.
- The tilted annuity approach provides for full recovery of capital costs and a return on capital. Consequently, so long as the WACC and asset base assumptions are practically feasible, the aggregate of the WACC charge and depreciation recovery resulting from the application of the approach are necessarily also practically feasible.]
- The tilted annuity methodology, given the approach taken to determining its inputs, results in a WACC charge and depreciation recovery that are independent of Fonterra's actual cost of capital and its actual depreciation expense, and is therefore consistent with the efficiency criterion.

Company tax

The table below sets out the inputs, assumptions and processes used to determine the quantum and timing of the company tax assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
NZ Company Tax Rate. Fonterra's weighted-average tax depreciation rate on assets relevant to the NMPB. The calculated EBIT of the NMPB.	Determine ratio of tax depreciation (given Fonterra's average tax depreciation rate) to 'tilted annuity' depreciation implied by the various key inputs into the tilted annuity calculation, & scale tilted annuity depreciation by this amount to derive an estimate of tax depreciation for the NMPB. Adjust the NMPB's calculated EBIT for the difference	That the approach taken to deriving an estimate of tax depreciation is reasonable. That the omission of any further adjustments for items that would in practice be relevant to the calculation of taxable income will not result in any systematic bias in the calculation of tax payable.

Inputs	Process	Assumptions
	between tilted annuity and calculated tax depreciation to arrive at an estimate of taxable earnings, exclusive of any interest tax shield, and apply the company tax rate to this amount to assess tax payable. Spread calculated tax in three equal instalments over the course of the relevant season.	

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing this input:

- The calculation generates a provision for tax depreciation that is consistent with applying Fonterra's weighted average tax depreciation rate for the relevant assets to the NMPB asset base, and is therefore practically feasible. (We note that the tax depreciation calculation is consistent with the assumption that the asset base of the NMPB has been installed in approximately equal instalments over, on average, the past 30 years or so. This is essentially a 'steady state' assumption, and means that the base milk price calculation does not capture the tax advantages available to a processor with predominantly recently-installed assets, and which arise from the often significant differences between average tax and economic asset lives.)
- Because the provision is notional, it follows that it is consistent with the efficiency criterion.

Net working capital

The table below sets out the inputs, assumptions and processes used to determine the quantum and associated financing costs of net working capital assumed in the calculation of the base milk price:

Inputs	Process	Assumptions
Monthly net working capital balances implied by the NMPB phasings of milk supply, production, sales, & non-milk costs. Fonterra's weighted average debtor days for the sales used to determine the prices for sales of RCPs used in the milk price (i.e. primarily sales on GDT). Fonterra's weighted average creditor days for costs relevant to the Milk Price. Fonterra's 'advance rate schedule', specifying timing & quantum of payments for milk supplied in the season. Assumptions with respect to inventories of inputs, such as lactose and packaging materials. Assumptions with respect to revenue and payables days, calculated by reference to relevant Fonterra actual data. The monthly compound WACC implied by the annual WACC.	Calculate implied opening net working balances for each month. Apply the monthly WACC to the monthly NWC balance. Deduct the implied WACC charge in the course of calculating the amount available to pay for milk.	That use of Fonterra's weighted average debtor days for (primarily) sales on GDT is consistent with use of prices from the same source. That use of Fonterra's weighted average creditor days in respect of costs relevant to the Milk Price is consistent, where relevant, with use of Fonterra's input prices.

We offer the following comments in support of the assumptions set out above, and with respect to (a) the practical feasibility and (b) the efficiency implications of the approach taken to establishing each input:

- Because the key determinants of the monthly working capital balances assumed in the base milk price (milk supply profile, sales phasings, cost phasings, credit and debtor days, advance rate schedule) are all aligned to the relevant Fonterra actuals, it follows that the derived balances are practically feasible.
- While the various inputs are all derived from Fonterra data, the base milk price calculation does not result in Fonterra's actual current year working capital balances (or components thereof) being included in the base milk price, so the methodology is therefore consistent with the efficiency criterion.

9 Overall consistency of inputs, processes and assumptions

We comment in this section on:

- The overall internal consistency of the various inputs, assumptions and processes described in sections 5 – 8 above, and summarise the reasons why, in our view, the base milk price resulting from the application of these inputs, assumptions and processes is consistent with section 150A. In particular, we have set out above the reasons why we consider each of the inputs used in calculating the base milk price is individually consistent with section 150A. The Commission has also noted, however, that section 150A effectively requires that there also be overall consistency among the assumptions and inputs used to calculate the base milk price.
- The overall consistency of the projected base milk price with the contestability dimension of section 150A.
- The overall consistency of the projected base milk price with the efficiency dimension of section 150A.

Internal consistency

We provide comments in the table below on matters relevant to considering the internal consistency of the various inputs and assumptions used in the base milk price (these largely repeat and consolidate arguments presented in sections 5 – 8 above.)

Input	Interdependencies	Comments on Consistency
Production mix and volumes	Milk supply and composition	Calculation process ensures assumed product mix is consistent with Fonterra's allocation of milk to relevant streams, and with Fonterra's actual milk supply.
	Yields	Assumed yields are consistent with yields actually achieved / achievable by Fonterra for manufacture of RCPs.
	Automation & process control capital & opex	Fonterra's achieved yields reflect Fonterra's investment in automation process and control systems, and in dedicated staff who ensure the systems are used to tightly control yields. NPMB appropriately provides for these costs.
	Direct manufacturing costs	Calculated to be consistent with the assumed product mix, drawing on mix of independent expert input and relevant data on Fonterra's actual costs.
	Manufacturing capital	Established on a forward looking basis to be consistent with (a) forecast milk supply and (b) manufacture of RCP portfolio. Assumed costs reconcile to manufacturer quotations and costs actually incurred by Fonterra.
	Fixed asset capital costs	Calculated to result in recovery of capital cost of manufacturing and collection assets, and of WACC return on undepreciated cost.
GDT prices	Product composition	Composition of RCPs consistent with composition of product actually sold by Fonterra on GDT.
	Selling costs	Selling costs calculated to be consistent with assumption that product is primarily sold on GDT, including material provision for customer support.
	Ocean freight recoveries	Consistent with Fonterra's actual recoveries, which will on average be factored into GDT selling prices.
	Sales phasings	Use of Fonterra's phasings means any pricing impact of variations in Fonterra's actual sales of RCPs will also be reflected in milk price.
Collection costs	Milk supply	Use of Fonterra's actual milk supply consistent with use of Fonterra's actual collection costs.
	Site footprint	Alignment of assumed NMPB site footprint to Fonterra's consistent with

Input	Interdependencies	Comments on Consistency
		use of Fonterra's actual collection costs.
Lactose cost	Yields	Lactose usage requirements consistent with milk composition and product composition assumptions.
	Lactose price	Lactose price consistent with prices paid by importers of lactose for powder standardisation.
Site overhead costs	Site and asset footprint	Site-level overhead costs consistent with assumed site footprint and product mix.
Logistics costs	Production volumes	Inland freight and storage costs consistent with production volumes and product mix.
	Site footprint	Calculation of logistics costs consistent with assumed site locations and assumed throughput of milk through each site.
Overhead costs	Scope of NMPB business	Assumed overhead costs consistent with activities of NMPB, including manufacture of RCPs and primary activities all being located in New Zealand.
Net working capital capital costs	Sales phasings & production phasings	Net working capital balances consistent with inventory volumes implied by the sales phasings, product mix and phasing of milk supply.
	Average receivables days for GDT sales	Use of Fonterra's weighted average receivables days for the sales used to calculate Milk Price revenue is consistent with use of prices from those sales (on basis that prices paid will reflect the relevant terms of supply).
	Fonterra's average payable days (including for milk)	Use of Fonterra's average payable days (where relevant) is consistent with use of cost inputs derived from Fonterra actual data.
	WACC	Use of WACC to calculate capital charge on monthly net working capital balances is consistent with the assumption that the leverage assumed in the WACC calculation reasonably reflects average debt to debt plus equity through the course of a season for a commodity manufacturer of the NMPB's scale.
Fixed asset capital costs	Production volumes	The fixed asset base is consistent with production of the RCPs, and is of sufficient scale to manufacture the volume of RCPs assumed in the Milk Price.
	Site footprint	The fixed asset base includes appropriate provision for site-level assets given the configuration of the site footprint, and assumed peak milk supply to each site.
	WACC	Inputs into the WACC reasonably reflect the average cost of capital for a manufacturer of the NMPB's scale, and which uses the Farmgate Milk Price methodology to determine its cost of milk.

Overall consistency with contestability dimension of section 150A

Sections 150B and 150C respectively permit (section 150B) and require (section150C) that the base milk price calculation incorporates the following assumptions:

- Fonterra's scale, including Fonterra's milk supply and site footprint.
- Fonterra's average plant size for the manufacture of the RCPs.
- Fonterra's average foreign currency conversion rate.
- That all milk is assumed to be manufactured into the RCPs that are expected to be the most profitable
- The conversion of milk into RCPs at yields that are practically feasible.
- The use of prices actually achieved by Fonterra on the sale of RCPs.
- That the full range of costs that would be incurred by a manufacturer of Fonterra's scale in manufacturing the RCPs is taken into account.

Some submissions to the Commission on the Commission's Dry Run, Manual Review and Process Papers have in essence argued that incorporation of these assumptions necessarily results in a base milk price that is not practically feasible for any New Zealand processor. We do not share this view, and note in particular the following aspects of the Farmgate Milk Price that are not 'fully optimised':

- The near-sole reliance in the base milk price on prices achieved by Fonterra on GDT: we have separately provided to the Commission evidence that both Fonterra and other New Zealand processors routinely achieve prices materially in excess of GDT for commodity product sold through other sales channels. (Indeed, we note that Synlait in its prospectus released on 24 June 2013 has forecast average selling prices in its 2014 financial year on ingredients products of more than NZD 200 per MT in excess of prices achieved on GDT.)
- The assumption of Fonterra's actual site footprint (a safe harbour rather than mandatory assumption): Fonterra's actual site footprint (primarily) reflects historic investment decisions made by Fonterra's predecessor companies, and implies the incorporation in the milk price of capital and overhead costs that are materially higher than the costs that would have arisen had a 'greenfields' approach been taken to establishing the NMPB's site and asset footprint.
- The assumption of Fonterra's actual milk supply (also a safe harbour rather than mandatory assumption): Fonterra has very limited ability under DIRA to decline supply, and consequently incurs materially higher collection costs per kgMS than other processors. While there are some offsetting scale economies, the base milk price would nonetheless be materially higher if it was calculated under the assumption that the NMPB only collected the milk supplied to Fonterra that would be collected by a profit-maximising processor that was not subject to DIRA.
- The assumption that the NMPB participates on GDT on an arm's length basis, with the difference between the calculated arm's length fee and Fonterra's materially lower actual costs therefore being excluded from the base milk price.
- The assumption that the NMPB, like Fonterra, faces logistical constraints which mean (a) it must carry materially more inventory (and therefore incur materially higher working capital costs) over the peak production months and (b) has less ability to take advantage of favourable short term movements in prices over the same period, relative to smaller processors.
- The assumption that the NMPB, like Fonterra, is not able to take advantage of regulated raw milk under DIRA to increase (and obtain increased certainty over) capacity utilisation.
- The 'bottom up' approach described in section 7 and Attachment 1 to calculating overhead and administrative costs by reference to Fonterra's actual costs, which has the effect, for example, of impounding in the base milk price the higher costs associated with some of Fonterra's legacy IT systems (relative to the alternative of taking a 'greenfields' approach to establishing the NMPB's IS requirements and costs).
- The assumption that the NMPB, like Fonterra, incurs various costs of an 'industry good' nature that would not be incurred by a smaller processor.

Overall consistency with efficiency dimension of section 150A

We noted in our comments on the individual inputs into the base milk price certain instances where inputs are based on current year Fonterra actual data, and in respect of which there is therefore a weakened incentive (relative to the use of a notional input) for Fonterra to operate efficiently in respect of the relevant factor.

We consider, however, that when considered in aggregate the inputs, processes and assumptions used to calculate the proposed base milk price are consistent with the efficiency dimension of section 150A. In particular, we note that:

- Most of the cost inputs into the projected base milk price are calculated independently of current year actual Fonterra data (72 percent of the cost inputs into the projected base milk price are fully independent and a further 17 percent are partially independent of actual Fonterra data for the 2012/13 financial year).

- Total production volumes and approximately 90 percent of the prices used to determine the revenue of the NMPB reflect factors beyond Fonterra's ability to directly influence (i.e. actual milk supply and composition, independently established provisions for yields, and GDT prices.
- Putting to one side considerations as to whether Fonterra is fully incentivised to optimise its performance with respect to individual cost and revenue inputs into the base milk price, Fonterra is appropriately incentivised to ensure that the overall base milk price is consistent with maintaining and growing milk supply (i.e. to ensure the base milk price is perceived to be 'competitive'), but that the base milk price is not so high as to render Fonterra's incremental investment decisions uneconomic.

Attachment 1: Activities provided for in provision for overhead & administrative costs

We list below the full range of Fonterra's activities provided for in the overall provision for overhead and administrative costs, and comment briefly on the approach taken with respect to each item. (The comments below in many instances note that Fonterra's 'actual' costs, or portions thereof, are included in the base milk price calculation. The 'actual' costs referenced relate to Fonterra's F12 budget, with the relevant provisions subsequently carried forward and adjusted for inflation. This approach leaves Fonterra appropriately incentivised to minimise its actual costs.)

Category	Comment
Supplier & External Relations, comprising costs associated with:	
Milk supply	100% of Fonterra's budgeted F12 costs associated with monitoring & surveillance, area managers & supplier-related IS costs included in milk price costs.
Sustainability	Fonterra incurs considerable cost (much of which would not be incurred by other processors, and which can therefore be considered a 'diseconomy' of scale) on issues such as effluence management, reducing waste & energy consumption, developing water strategies, & providing input local & central government policy formation. Most of these costs have been included in the milk price calculation.
External relations	Again, Fonterra incurs costs that would not necessarily be incurred by other processors, but which it can be argued are necessary for a manufacturer of the NMPB's scale to maintain milk supply. These costs are largely included in the milk price calculation.
Trade strategy	Similarly, Fonterra incurs costs in ensuring its (and the wider industry's) interests are considered in trade negotiations and the like that are unlikely to be incurred by other processors, but which it can be argued are necessary for a manufacturer of the NMPB's scale to maintain milk supply. These costs are fully included in the milk price calculation.
Corporate marketing	Fonterra incurs marketing costs in relating, for example, to positioning dairy as a nutritional and healthy option, to funding initiatives in local communities, & in respect of environmental sustainability. These costs are largely included in the milk price calculation though, again, it is likely that at least a portion would not be incurred by a smaller-scale processor.
Governance costs, comprising costs associated with:	
Board of Directors	Fonterra's actual costs, with a modest reduction to provide for the difference in scope of activities between Fonterra and the NMPB, are included in the base milk price calculation.
Milk Price Group	The milk price calculation includes a provision for the various costs associated with the operation and maintenance of the Farmgate Milk Price methodology, though we again note that equivalent costs would generally not be incurred by other processors.

Fonterra's Fair Value Share process	While now discontinued, the process was relevant at the time the 'review year' provision was established, and a provision included on the basis that a portion of this cost would still be incurred if Fonterra undertook the same activities as the NMPB. With the introduction of TAF, this provision can now be viewed as providing for the costs associated with maintaining a market listing. Under either approach, however, it does not necessarily follow that equivalent costs would be incurred by other processors.
Shareholders' Council	While again not necessarily relevant to most processors, the milk price calculation reflects most of the costs associated with maintaining Fonterra's Shareholders' Council.
Human Resources	Milk price provision based on Fonterra's actual costs, scaled for difference in head-count.
Costs associated with finance function:	
Transactional support (AP & AR etc), administration of capex, periodic reporting etc	Based on Fonterra's actual costs, adjusted to exclude costs incurred by Fonterra that would not be incurred by the NMPB, including costs relating to Fonterra's offshore operations, such as a portion of Fonterra's external audit fee & portions of its legal & tax function costs. Where costs relate to activities that would be materially identical for the NMPB, Fonterra's actual costs have been included in their entirety. In some instances Fonterra's actual costs are further adjusted to reflect differences in the complexity of Fonterra's business. 80% of the actual cost of Fonterra's Treasury operation is included, for example, with the excluded portion primarily reflecting Treasury-related costs attributable to Fonterra's extensive network of offshore subsidiaries and businesses.
Financial reporting, budgeting & forecasting	
Communications	
Treasury	
Legal Administration	
Internal Audit	
Share Registry and Payments	
Strategy and Corporate Finance	
Group Tax	
Policy and Risk	
Regulatory	
Customs	
Property	
IS costs	Based on Fonterra's actual costs (which incur costs associated with legacy systems and historic IS investments, not all of which would have been incurred by the NMPB) scaled to reflect differences in characteristics and activities of the NMPB relative to Fonterra.
Senior management team	Based on the senior management team for Fonterra's NZ manufacturing operations, adjusted where appropriate to include functions captured elsewhere.
Manufacturing overhead costs, including costs associated with:	
Quality assurance and technical management	Based on Fonterra's actual costs, adjusted to exclude costs incurred by Fonterra that would not be incurred by the NMPB, including costs relating to Fonterra's offshore operations.
Automation, process control and calibration	
Quality & complaints	
Environmental	
Grading	
Capital maintenance and assets	
Innovation	
Optimisation & strategy (including production planning)	
Procurement	

Attachment 2: Summary of files containing inputs & processes used to calculate projected base milk price as at 31 May 2013

The table below summarises the Excel files we have separately provided the Commission, which contain the detailed input data and calculation processes used to derive the forecast of the 2012/13 base milk price as at 31 May 2013.

Model	Ref	Type	Name	Description
Milk Price model				
	1	**Model**	F13 May 31 Milk Price Reporting Model	F13 May Milk Price Reporting Model
	1.1	**Input**	Carbon Prices_ May 2013	May 2013 carbon credit price, used to calculate monthly carbon credit prices from ERU and NZU to be used in the Milk Price Model
	1.2	**Input**	F13 May 31 FACR Scenarios	FX forecast for USD:NZD
Shipment Month BCP				
	2	**Model**	FY13 May Shipment Month BCP Model	The Shipment Month BCP model that calculates the BCPs for YTD sales
	2.1	**Input**	F13 May 31 Shipment BCP Data	Shipment BCP Data download from RAMP
Implied Shipment BCP				
	3	**Model**	F13 May Implied Shipment BCP Model	Implied Shipment BCP model
	3.1	**Input**	Refer to line item 4 below.	Output from Contract Month Data Adjustment is input into the Implied Shipment BCP Model
Contract Month data adjust				
	4	**Model**	F13 May Contract month data adjusted	Used to sort the Implied Shipment BCP data download from RAMP into appropriate format before feeding into both the Contract Month BCP Model and Implied Shipment BCP Model.
	4.1	**Input**	F13 May Implied Shipment BCP Data	Implied Shipment BCP data download from RAMP
Contract Month BCP				
	5	**Model**	F13 May Contract Month BCP model	Used to generate the shipment price mean and standard deviations for use in the Shipment Month BCP Model and Implied Shipment BCP Model
	5.1	**Input**	Refer to line item 4 above.	Output from Contract Month Data Adjustment is input into the Contract Month BCP Model
BCP model				
	6	**Model**	FY13 May BCP Model	Calculated uncontracted BCP prices
	6.1	**Input Data**	Uncontracted Price Forecast	These are forecast uncontracted BCP prices input into the BCP model
Lactose Pricing model				
	7	**Model**	FY13 May Lactose Price Model	Calculates lactose and CIF costs in the Milk Price model
	7.1	**Input Data**	Lactose import data	Lactose import data from Statistics New Zealand
Sales Phasing model				
	8	**Model**	F13 May Sales Phasings Model	Generates the sales phasing percentages and contracted sales percentages used in the Milk Price Model

Model	Ref	Type	Name	Description
	8.1	**Input Data**	F13 May Closing Inventory Solids	Input data into Sales Phasing model with closing inventory milksolids for each of the RCP (Reference commodity product)
	8.2	**Input Data**	F13 Month End Fonterra inventory	Fonterra Inventory list
	8.3	**Input Data**	F13 May Production Plan	The production target plan for the year covering all five RCPs. It is used to calculates opening and closing inventory, WMP/(WMP+SMP) and Butter/(Butter+AMF) ratios etc. The file includes inputs into the Sales Phasing model, the Production model and the Milk Price model.
Made Allowance model				
	9	**Model**	F13 May Cash Costs Model	Make Allowance Model / Cash Cost Model
Production model				
	10	**Model**	F13 May Production Model	The Production model, used to calculate annual diversion costs and production volumes by sites which are inputs into the Cash Costs Model
	10.1	**Input Data**	F13 May YTD Solids	Year-to-Date milk solid production. It is also input into the Yield's Model and MPM
	10.2	**Input Data**	F13 May YTG Solids	Year-to-Go milk solid production forecast. It is also input into the Yield's Model and MPM
	10.3	**Input Data**	Historical Milk Comp 31May13	Milk composition for fat and protein content, it is input into both Production model and MPG Yields model
MPG Yields model				
	11	**Model**	F13 May MPG Yields	Used to calculate monthly finished product yields & added lactose requirements, given milk supply & composition, for input into the Milk Price model
	11.1	**Input**	Refer to line item 10.3 and 8.3 above	Target Plan and Historical Milk Compositions are inputs into the Yield's Model
Capital model				
	12	**Model**	Capital Costs - for F13 Milk Price at 31 Jan 2013	Used to calculate depreciation and capital charge on fixed assets, which are inputs into the Milk Price Model.

Attachment 3: Additional material provided to the Commission in support of Fonterra's reasons

The table below summarises additional material, the content of which is commercially confidential to Fonterra, that has been provided to the Commission in support of certain statements made in this document, and which should therefore be considered in conjunction with this document.

Category	Sub Category	File Name
Assurance		ED4 Post Investment Review.pptx
Assurance		F09 - F13 Milk Price Detail v2 22 Feb 2013.xlsm
Assurance		Milk Price Summaries F09 - F13 7 Feb 2013.xlsm
Assurance		Internal Audit - points considered.xlsx
Assurance		Make Allowance Model Operating Manual.docx
Assurance		Milk Price Model Operating Manual.docx
Assurance		MPG half year report at 31 Jan 2013.docx
Assurance		PwC Half year report at 31 Jan 2013.pdf
Assurance		PwC model review report.pdf
Capital Costs		Milk Price tax depn assumption with DV - 28 Jan 20...
Capital Costs		Milk Price Modeling Report Rev3 - Part 1 of 2 Repo...
Capital Costs		Milk Price Modeling Report Rev3 - Part 2 of 2 Appe...
Capital Costs		Asset Life from DTZ.xlsx
Capital Costs		F13 Dry Stores Capital 25 June 2012.xlsx
Capital Costs		WACC calculation model
Capital Costs		Item 3.1 MPG Paper Review Year Asset Base 18 May 2...
Capital Costs		JLL Darfield Valuation May 2013.xlsx
Capital Costs		JLL Milk Price Asset Valuation May 2013.xlsx
Capital Costs		Milk Price Plant Capacit vs Fonterra Average.xlsx
Capital Costs		MPG File Note - DTZs Initial Plant Cost Issues - 2...
Capital Costs		Site Services Capital 3 April 2012.xlsm
Cash Costs	Collection	Milk Collection Presentation.ppt
Cash Costs	Collection	Milk Collection Cost Data
Cash Costs	Collection	Milk Collection Asset Values at 31 7 2012 to ComCo...
Cash Costs	Energy	100511 M Independent reviewer analysis.docx
Cash Costs	Energy	121221 M Energy cost review Final.pdf
Cash Costs	Energy	Attachment 3 - Energy Rates F13.xlsx
Cash Costs	Energy	Attachment 8 - GEA Yield and Energy Figures for IM...
Cash Costs	Energy	Comparison of milk price model energy costs to Fonterra budget
Cash Costs	Energy	Milk Price Reset F13 Resource usage summary.docx
Cash Costs	General	Attachment 4 - Product Costing Data Input F12 Milk...
Cash Costs	General	F12 Budget site overhead info Downloads v6.xlsx
Cash Costs	General	Fonterra Management Response Rework v non rework v...
Cash Costs	Labour	Attachment 01 - Fonterra and MP FTE Analysis v2.xl...
Cash Costs	Labour	Attachment 02 - Reference Plant Staff for F13-16 R...
Cash Costs	Labour	Attachment 03 - Salary F13.xlsx
Cash Costs	Labour	Manufacturing Temp Labour Review (Revised) 2013-02...
Cash Costs	Labour	130502 Final M Labour and ERE review.pdf
Cash Costs	Labour	Attachment 2 - ERE Costs F12 v1 130611.xlsm
Cash Costs	Labour	DWU contracts.xlsx

Category	Sub Category	File Name
Cash Costs	Labour	Manufacturing Temp Labour Review 2013-02...
Cash Costs	Lactose	Lactose Loss Allowance F13 2013-03-14 (2) (2).pdf
Cash Costs	Lactose	Lactose Loss Allowance F13 2013-03-14 (2).pdf
Cash Costs	Overheads	180512 Fonterra Overheads Summary FINAL.docx
Cash Costs	Overheads	120327 FY12 IS Total Costs (plan allocation model)...
Cash Costs	Overheads	F13 Apr IMP Make Allowance Model VCR v3.1.xlsm
Cash Costs	Overheads	F13 Reset - Insurance 2012-01-13.pdf
Cash Costs	Overheads	NZDL Mgmt and Admin Overheads.xlsx
Cash Costs	Overheads	SER Overheads MP.xlsx
Cash Costs	Packaging	information on standard plants.msg
Cash Costs	Packaging	Packaging - Reset Usages.docx
Cash Costs	Packaging	Packaging Actual Costs - F12.xlsx
Cash Costs	Packaging	Packaging Analysis June 2011.docx
Cash Costs	Packaging	RE Some additional questions RE packaging artefact...
Cash Costs	Packaging	RE working capital for packaging.msg
Cash Costs	R&M	Capital Costs - 25 June 2012.xlsm
Cash Costs	R&M	Ratio Summary F08-F11 Actuals.xlsx
Cash Costs	Supply Chain	Attachment 1 - Land Freight Milk Price Inputs FY13...
Cash Costs	Supply Chain	Dry store costs.xlsx
Revenue		Downgrade Allowances in the Notional Milk Price – ...
Revenue		Analysis of price achievement vs GDT for NZ dairy exports
Revenue		Downgrade Rates - F13 Budget Final ($5.50 MP).xlsx
Revenue		130423 AMF - summary results.xlsx
Revenue		130423 SMP - summary results.xlsx
Revenue		130423 WMP results.xlsm
Revenue		NZ Dairies_WMP Contracts_27022013.xlsm
Revenue		4.1 MPG Paper Off-GDT Price Achievement 17 May 201...