



## 1.0 Fonterra Milk Collection

### An Introduction to our Business

Fonterra is a global, co-operatively-owned dairy nutrition company. We are owned by more than 10,500 farmers and their families who together produce approximately 22 billion litres of milk each year.

With this milk Fonterra produces more than two million tonnes of dairy ingredients, specialty ingredients and consumer products each year, with 95 per cent of these exported to millions of consumers in approximately 140 countries around the world.

Our business is based on sourcing secure, high quality milk and unlocking its natural goodness in ways that add value for our customers and consumers around the world.

Milk Collection is an important part of the company's value stream and within New Zealand is made up of 500 Tanker fleet collecting 18 billion litres of milk annually from our farmer shareholders, delivering the raw milk to 31 dairy manufacturing sites. Milk Collection employs 1800 staff based at 14 Transport Depots across the country. This includes 1650 Tanker Operators and Servicemen.

Our ambition is to ensure our people are healthy, live with balance, and go home safely every day, everywhere.

## 2.0 What were the identified issues?

Exposure to on-road hazards and the potential impact an event on road can have on the public, communities, our tanker operators and their families has identified On Road Driving - Heavy Vehicles as a critical risk within our business. Fatigue has been identified as a major contributor to potential high severity events for our Tanker Operators. Due to the low number of fatigue related reported events across the organisation (114 since August 2012) there had not been a burning platform to understand and effectively manage emerging risk.

Through event investigations and a review of our organisational systems and practises the following gaps were identified:

- There was not an established culture within Milk Collection of escalating fatigue concerns. Self-reporting was very adhoc.
- An absence of guidelines for leaders to follow when managing reports of driver fatigue
- Training had been provided to Tanker Operators on how to manage shift-work but not specifically to Managers on how to recognise and manage the effects of fatigue.
- Tanker operators were not provided with sufficient information on how to recognise and deal with fatigue in themselves and others.
- Fatigue was not considered as part of internal event investigations or an area that our leaders would monitor to identify symptoms of fatigue and at risk individuals.
- Our existing systems and processes were not being monitored or used effectively to ensure sufficient sleep opportunity.

- Fatigue was not being considered as part of daily decision-making.
- There was no process in place to predict the likelihood of fatigue impairment with associated work hours.

### 3.0 What solutions did we implement to manage the identified issues?

#### 3.1 Fatigue management framework – Fatigue Risk Bow-tie

Specific controls have been identified to ensure we have a range of strategies in place to manage and monitor fatigue across our business. The controls sit within our existing Safe Home System and have been risk assessed to provide multiple layers of defence.

A multi-disciplined working group was formed to complete a gap analysis on five layers of defence which then formed the basis for the improvement activities:

##### a. Layer One: Sleep Opportunity

**Objective: Ensuring systems and structures provide sufficient time available for sleep**

A fatigue risk assessment tool (FAID) was introduced to assist in identifying fatigue exposure across our Milk Collection depots and track the effects of associated risk improvements to hours of work.

The Fatigue Risk Assessment report presents the compliance to working under the fatigue tolerance limits (FTL), by depot. A risk matrix is shown giving the number of Tanker Operators who have worked in the green, yellow and red zones, namely, under permissible FTL, at risk and over the FTL respectively. It then identifies the drivers who have worked over the FTL and further drills down on an individual Tanker Operator's log by days worked showing the hours in the red condition. The fatigue tolerance limit set for Fonterra is 90.

This weekly information enables Depot leadership teams to analyse the affectivity of other systems including call-back mechanisms, leave management and milk scheduling. Intervention strategies are implemented to manage potential at risk persons.

##### b. Layer 2: Individual Sleep Obtained

**Objective: Making sure employees actually get sufficient sleep**

A fatigue risk management procedure was developed to provide NZ Milk Collection with a guide and supporting tools to manage the immediate and initial responses to fatigue identification. This procedure clarifies Employee, Manager, Planning & Despatch responsibilities when fatigue is reported.

It includes an individual fatigue self-assessment tool for the tanker operator's to assess their level of fatigue. It enables the Tanker Operator and Team manager to evaluate immediate risk and determine remedial action to ensure fitness to perform their role safely. It provides opportunity for a more in-depth investigation following the immediate notification.

##### c. Layer 3: Fatigue Related Symptoms

**Objective: Monitoring for symptoms that indicate employees are fatigued. Identifying at risk individuals**

Pre-employment and annual health assessment processes have been enhanced through the implementation of an Epworth Sleepiness Scale. This has promoted improved discussion between our Tanker Operators and Occupational Health Nurses to identify any fatigue symptoms or risks that may need additional attention.

A training presentation and booklet has been developed to educate both Team Managers and Tanker Operators on how to recognise and manage the effects of fatigue. The Depot training team have undertaken Train the Trainer sessions to ensure effective and consistent facilitation practises. This programme can be utilised at any point across an employee's "hire to retire" tenure. This includes pre-employment, on-boarding, role transfer, annual refresher, when an employee raises a fatigue concern.

The FAID tool (as mentioned in 3.1(a)) provides information that drills down on an individual Tanker Operator's log by days worked showing the hours in the red condition. Following the Fatigue Risk Management procedure, the Team Manger can then initiate an investigation meeting with the Tanker Operator to determine if any additional controls are required.

#### d. Layer 4: Fatigue Proofing Strategies

**Objective: To reduce the risk of active failures – the direct cause of an event.**

The Fatigue Risk Management procedure enables the Team Manager and Tanker Operator to evaluate the fatigue risk. Remedial action includes restrictions in schedules for specific drivers, enabling self-selected breaks, and re-scheduling of runs. Car-pooling and wellbeing programmes are additional strategies that have been put in place.

#### e. Layer 5: Fatigue Related Events

**Objective: Event Investigations – asking the right questions**

The NZ Milk Collection Tanker Activity Management system (TAMS) produces a weekly report which focuses on Tanker Driving behaviour specifically over-speeding, harsh breaking and cornering. This information is reviewed at daily toolbox and management meetings and equips Team Managers with additional information to identify and manage potential fatigue related risk within their team.

Fatigue is now identified as a classification in the First Priority Health & Safety Information system and is prompted through the PEEPO analysis within our enhanced investigation processes.

### 4.0 When did we start to work on this initiative?

The key activities were prompted from a gap analysis initiated in the F15 season.

### 5.0 What evidence has shown our initiative has been successful?

A wide stakeholder group was formed to work collectively on the development of the procedure, tools and training. This involved Tanker Operators, Team Managers, Depot Managers, Employment Relations, Occupational Health specialists, Planning & Scheduling.

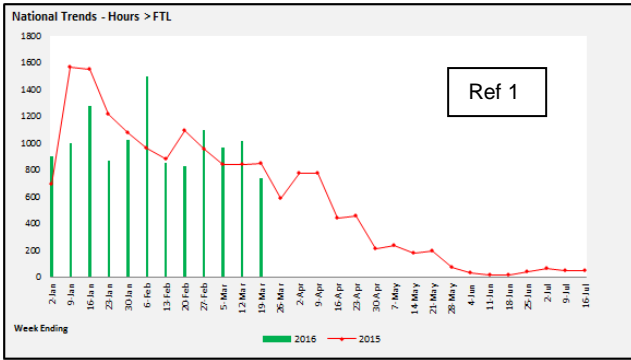
This has created a better understanding of roles & responsibilities and has equipped both Team Managers and Tanker Operators to have more robust conversations on fatigue.

Educational materials are in place to enable Tanker Operators and Team Managers to recognise and manage fatigue in themselves and others.

Fatigue is now included as a key consideration in event investigation and fatigue reporting is increasing.

Depot Managers are utilising the FAID tool to identify emerging risk, at risk individuals and to assist with roster planning. Visual measurement provides a platform to manage national trends (Ref 1 below). We tabulate by depot the tanker operators who have a high FAID score (Ref 2 below). This enables the depots to understand individual data and prompts discussion to determine if the potential risk requires intervention and immediate controls. This has resulted in both the Tanker Operator and Leadership taking personal ownership and responsibility to ensure fitness for role and that Tanker Operators understand that they are cared about.

To enable the procedure and controls to be embedded full benefit of this initiative will be realised in the coming year.



**Risk Matrix - Individuals at Edendale**

FAID Score	<80	80-90	>90	Compliance %
			0	0
			0	90
			5	95
	134	44	7	98

**National Compliance Hr (%) for the week**

**98.8%**

**Risk Matrix - Individuals**

FAID Score	<80	80-90	>90	Compliance %
			12	0
			89	90
			172	95
	640	390	139	98

Ref 2

**This project was undertaken with the support of Shiftwork Services.**