Freight improvement toolkit

Getting quality healthy food to remote Indigenous communities

November 2007

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DISCLAIMER
While all reasonable care has been taken in the production of this Toolkit, NRHA and its agents accept no liability resulting from the interpretation or use of the information set out in this publication. The circumstances of every remote Indigenous community, its store, freight services and supply chain are quite unique. Consequently, *any documentation or action planned or taken based on this Toolkit should be reviewed professionally and legally before it is used*.

RIST Transport Forum Project
Toolkit authored for the NRHA by Ian Lovell, Consultant

National Rural Health Alliance
PO Box 280
Deakin West ACT 2600

Phone: 02 6285 4660
Email: nrha@ruralhealth.org.au
Website: www.ruralhealth.org.au

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Introduction

It is widely recognised that fresh fruit and vegetables and other healthy foods are essential for the prevention and management of chronic conditions such as obesity, diabetes, high blood pressure and heart disease. Diet is an important risk factor accounting for 56% of all deaths.[1] For Aboriginal and Torres Strait Islanders healthy food is particularly important as they have a higher risk of chronic disease and a life expectancy of 17 to 20 years less than that of other Australians.

Many of the foods that remote Indigenous communities need in order to avoid ill health are perishable. So there is a real need for effective and affordable transport services to be available to all remote Indigenous communities.

In 2005 the Remote Indigenous Stores and Takeaways (RIST) project was initiated by Queensland Health together with the four other Australian jurisdictions and the Australian Government Department of Health and Ageing. Its broad aim is to improve access to healthy food by developing a framework with minimum standards for a healthy store, and identifying and setting up programs that encourage stores to recognise their role and responsibility towards their community's health, and actively contribute to it.

In the 2006 Federal Budget, $48.1 million was made available through Indigenous Business Australia (IBA) to provide a commercial management model for remote Indigenous stores for better governance, financial and stock management, supply chain improvement, hygiene, nutrition and staff employment conditions. Of these funds $8.1 million was set aside to establish a company called Outback Stores.

The Department of Health and Ageing also funded the National Rural Health Alliance, in partnership with RIST, to manage the National Food Transport Forum project, beginning with a National Food Transport Forum for Remote Indigenous Communities, held in Adelaide in 2006.

As a contribution to improving the fresh food supply chain, the RIST National Transport Forum project has developed this Freight Improvement Toolkit. It is a guide for remote Indigenous communities, as well as for others along the food supply chain who are keen to improve freight transport of healthy foods to remote stores. This Toolkit does not cover all you need to know, but is a starting point that will help you discover how you can improve and maintain a 'healthy' supply chain.

The document *Transport and Handling of Perishable Products in Remote Areas of South Australia* is a useful guide that should be used in conjunction with this Toolkit. Published by the Government of South Australia, with the support of the South Australian Freight Council, the South Australian Research and Development Institute, the Department of Primary Industries and Resources and the Department for Transport, Energy and Infrastructure, it is available at www.transport.sa.gov.au/pdfs/freight/LAMP_update/remoteareas.pdf.

[1] *Nutrition in Aboriginal and Torres Strait Islander Peoples: an information paper*, NHMRC 2000.

Purpose

This Toolkit is a two-part document that is intended to give people using freight services in remote Australian communities the information they need to help them get the best out of the service provided. **Part A** provides you with background information on the opportunities and pitfalls of perishable goods transport. In **Part B** you will find practical tables and examples to help you understand your own situation and improve your own methods.

The Toolkit aims to help you comply with regulations and reporting obligations. It is not intended to replace or alter any legal requirements. Any potential conflict between this work and relevant legislation should be resolved in favour of the legislation.

It is important that readers understand that this Toolkit is aimed at prompting discussion of freight arrangements. It is not fully comprehensive or prescriptive, nor a legal or contractual procurement document, or a government purchasing document.

Freight service requirements vary for different supply chains, so each community store, or groups of communities and stores, need to make sure they develop their own freight documentation and business plans and contracts to reflect their individual needs.

Any documentation or action based on this Toolkit must be reviewed professionally and legally before it is used.

PART A BACKGROUND INFORMATION

Freight management

The RIST National Transport Forum highlighted the importance of good freight management by communities and stores. Step through the checklist in Appendix 1 to identify potential problems in your own arrangements.

Your answers will tell you who provides the freight services, whether the recommended standard of a weekly delivery of fresh, chilled and frozen food is being met, how long it takes to get to you and how it gets to you. If you have answered ‘don’t know’ you need to get the answers.

Improving organisation and transparency

It is important that any freight arrangements entered into are based on merit, are rational and are ‘above board’. You can ensure this happens by checking that the freight selection process is transparent and reviewed by an independent third party or committee.

Freight contracts can also be useful in establishing service standards and providing security to the carrier who, in return, may improve service levels and frequency and possibly reduce costs if volumes increase. Working out the cost of a truck can be useful in ensuring a fair and sustainable service.

Even in cases where only one service provider exists, freight contracts with service level agreements can be useful to contain costs.

You should consider letting a period freight contract to two companies (even if one is nominated as preferred). Then, if service levels are not being met by one of them part way through the contract, you can use the other without going back to tender.

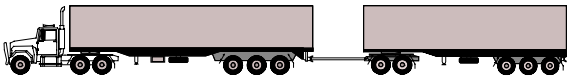
There are a number of truck cost models available commercially. Rick Copping of PKF International has offered to provide use of the model to remote Indigenous communities at no charge for a limited time. For commercial use enquiries please contact Mr Copping or his associates at rick@pkfmb.com.au.

Group freight buying

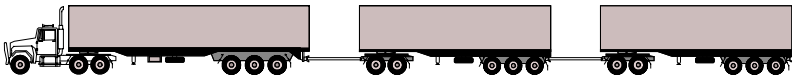
The words ‘group freight buying’ mean that a group of people, organisations and/or businesses get together to use their combined freight loads to gain a benefit. It is important to recognise that there is a range of different options available and each one has its particular advantages and disadvantages.

Group freight buying works by combining volumes to fill the transport unit on a geographically logical freight route, where trucks/barges are not at full capacity. This should result in the ability to increase service frequency (for example, from fortnightly to weekly) and/or lower the cost of freight per unit carried, such as a pallet. Generally the bigger the truck or barge the lower the cost.

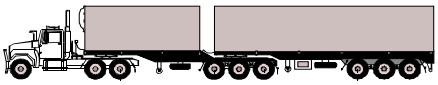
A-Double (double road train)
A road train comprising two full-sized trailers each with approximately 22 x 1 tonne (1.2 m x 1.2m x 2.4 m) pallet spaces. Average total of 44 pallet spaces



A-Triple (triple road train)
A road train comprising three full-sized trailers each with approximately 22 x 1 tonne (1.2 m x 1.2m x 2.4 m) pallet spaces. Average total of 66 pallet spaces



B-Double
A road train with a lead trailer of 12 tonne and/or 12 pallet spaces and a full-sized trailer with approximately 22 x 1 tonne (1.2 m x 1.2m x 2.4 m) pallet spaces. Average total of 34 pallet spaces



Semi-trailer
Full-sized trailer with approximately 22 x 1 tonne (1.2 m x 1.2m x 2.4 m) pallet spaces

Source: *Group Freight Buying Guide*, Department for Transport, Energy and Infrastructure/ProData.

Compared to a semi-trailer a B-Double has about one-third extra load carrying capacity, the A-Double road train twice the space and the A-Triple road train has three times the amount. Certainly the bigger the truck the more expensive it is to operate, but these extra costs are less than the extra payload it can carry. For a freight company with two semi-trailer loads to deliver to two communities close to each other it either has to use two semis or make two trips. If, however, it can combine the delivery it can make a single trip by using a double road train and pass some savings on to the stores and the customers.

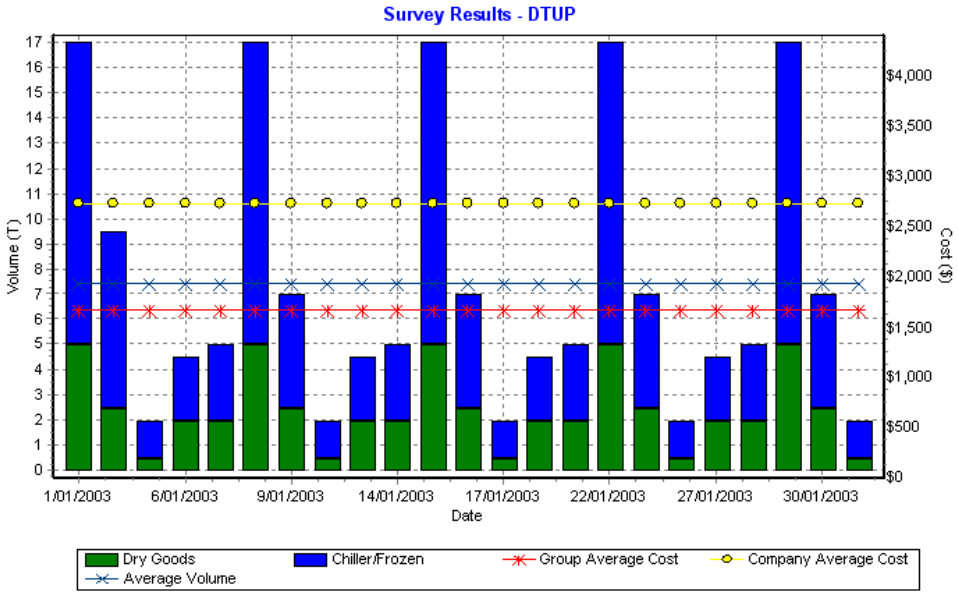
It is important to compare the existing situation with what might happen if you combine with others. A useful way of doing this is to use the *Group Freight*

Buying Guide available from the Department for Transport, Energy and Infrastructure's website: www.transport.sa.gov.au/pdfs/freight/LAMP_update/GroupFreightBuyingGuidev142July2.pdf.

You will need to get information on freight volumes, types of product shipped and existing freight rates. Different carriers charge on a different basis, so it is important to bring it back to a common unit, such as a per pallet rate.

Following a freight survey of a group of stores on the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands, freight savings were fed into the *Group Freight Buying Guide* 'demand profiler model' and showed potential savings of 40%. This is shown in Figure 1.

Figure 1 Survey results



Freight Consolidation Statistics

	Volume (T)	Cost ($)	Cost / Tonne ($)	Saving (%)
Company	171	$62,607	$367	
Consolidated	171	$38,119	$224	**39.1%**

Source: *Group Freight Buying Guide*, Department for Transport, Energy and Infrastructure/ProData.

To run this exercise for your group you should first read the *Group Freight Buying Guide* and then use the Group Freight Profiler software.

In September 2003, Department of Transport, Energy and Infrastructure (DTEI) commissioned Prodata Solutions to develop a group freight buying software system.

The system comprises two parts:

- The first is a freight demand forecasting tool (Profiler), which enables stores to calculate their freight cost savings based on the volume, cost and frequency of current freight deliveries. DTEI is happy to work with communities to calculate their potential cost savings.

- The second part of the system, owned by Prodata Solutions, provides a freight booking spreadsheet that enables the placement of a booking request describing goods, unit size, handling and temperature requirements, pick-up and delivery dates, as well as a system that groups orders received and calculates unit loads based on pallets to optimise truck utilisation. The system also matches freight to vehicles available and determines pick-up and delivery date options and costs.

For more information please contact Shaisee Ranford, Senior Project Officer, Ports and Logistics, Department of Transport, Energy and Infrastructure on (08) 8204 8112 or by email shaisee.ranford@saugov.sa.gov.au.

Group buying models

There are a number of ways of developing a group buying scheme. They include the following.

- The group of stores negotiate a freight rate by contracting their individual volumes under a combined freight contract. Nothing else changes. The stores continue to order, when they choose to, for deliveries on an agreed delivery date. Each store is invoiced separately and freight rates are different for each store. This can work where there is reasonably strong competition between freight carriers.

- The group of stores negotiates a freight rate as above and agree on a common order and delivery timetable. The freight company issues single invoices to the buying group and leaves it to that group to recover freight costs from each individual store.

- The group of stores forms a company that negotiates freight arrangements with a third-party carrier. Stores are charged for freight services and, depending on their volumes, receive a share of the surplus generated by the freight company on, say, a quarterly basis.

- The group of stores appoints a freight co-ordinator and a selected number of preferred service providers. Store orders are processed centrally by the freight co-ordinator and arrangements to maximise loads are worked out. Instructions are then sent to the preferred carrier that has the capability to deliver the goods on time at the best rate. Computer-based systems such as Viper:Online can be used for this purpose.

There are a number of different models of group freight buying currently operating for Indigenous remote communities. These include:

- Ngaanyatjarra Agencies and Transport Services (NATS)
  www.tjulyuru.com/nats.asp

- APY Lands Mai Wiru Stores
  www.nganampahealth.com.au

- The Arnhem Land Progress Association (ALPA)
  www.alpa.asn.au.

Each model is different:

- NATS has a vertically integrated approach where it manages supplies, warehouses and consolidates product, contracts and manages transport services and is involved in community stores.

- The APY model is less vertically integrated and has a preferred third-party freight transport company contracted to provide regular services.

- The ALPA model not only buys supplies and freight services for its five communities but also provides services to other communities.

If you are investigating group freight buying, take the time to visit their websites and check out their case studies in Appendix 3.

Freight buying and performance assessment guide

Invitation to provide freight services—who to invite to bid for freight services and how

An invitation to transport operators to provide freight services may be prompted by:

- an existing operator ceasing its service
- a review of existing services to be satisfied that the most appropriate service is in place
- the need for a new service by a number of communities deciding to work together.

There are a number of ways freight services can be sought, including the following:

- an invitation to the existing carrier to submit a freight service proposal for a period contract—this might occur where there is no desire to change carrier but service changes are sought, such as moving from a fortnightly to a weekly service
- a request to a number of carriers known to be capable and/or interested in providing the service—this might occur where time is short and/or local knowledge or specific capabilities are sought
- an open invitation to all carriers issued by placing an advertisement in newspaper(s).

Of the three options the open invitation is generally considered to be the most competitive.

For example, a number of remote communities have small freight volumes that only warrant one carrier providing a service. The risk there is that, if volumes decline, or the carrier sees better opportunities elsewhere, then the service may be withdrawn or prices dramatically increased. This can also occur if the carrier loses a core freight contract. There are a number of things that can be done to combat this:

- negotiate a freight contract that is long enough and appropriately priced to ensure the carrier is committed to providing the specified service for that period and can operate profitably

- identify other businesses and communities that are naturally on the freight route and develop a group freight buying alliance
- regularly review the service with the carrier.

Both the truck cost model (p. 5) and the group buying model (p. 8) will be helpful.

To identify which carriers to invite to bid for a freight service, consider using local knowledge, talking to other businesses, service stations, schools, health clinics, regional development organisations, State Emergency Services, your State road transport association and local government.

If it looks as if a freight service will be unexpectedly stopped without having time to replace it and it will put the community food supply at risk, talk to the emergency services organisation and/or regional development organisation and see what assistance might be available.

Fairness of process

It is important that all parties be invited to submit their proposal within the same time frame and that the information given to each carrier is the same. Care needs to be taken in discussions with individual carriers during the period they are preparing their bids. This will ensure no one company is provided with information that provides it with an unfair advantage. This can be assisted by having a single contact person—who has no affiliations with any of the potential carriers or suppliers—to answer all questions, and having a process in place that ensures questions of relevance that provide new information to one carrier is shared with the others.

Preparing the bid specifications

Whether you are negotiating with the existing carrier, issuing invitations to bid for a service, or calling by open tender, it is important to have clear specifications that cover what you need.

Some of the key areas you might want to look at include:

- What service frequency do you want? A minimum of a weekly service is preferred to ensure that fruit and vegetables are fresh.
- Where do you want the service to come from and go to? This will be dictated by where your suppliers are and which communities and stores are involved.
- What are your weekly estimated freight volumes and how much do they vary? This needs to differentiate between fresh, chilled, frozen and dry goods, gas bottles, whitegoods and building supplies plus any other categories of freight you have.

- What freight categories do you want the company to carry and with what frequency? This might be dry goods fortnightly, perishables weekly and gas bottles and building supplies monthly.
- What types of freight would you want to be given priority over other types of freight? For example, perishables?
- How important is it for perishable products to be kept at the right temperature from pick-up to in-store delivery? If product is not kept at the right temperature it can cause food safety problems and be unappealing to customers.
- How important is it for the service to be reliable and for the shipment to be delivered on time, in full and undamaged? If your community is extremely remote this is likely to be very important as you could run out of supplies.
- How important is price compared to service? Affordability is always an issue but there is little point having a cheap service that fails badly in other key areas.
- What will the carrier need to do to keep the service running in the wet or if the truck breaks down? Find out what the emergency services organisations can do and what they expect of you and your freight carrier.
- How important is it that the carrier provides skills and training opportunities to the community? Carriers vary considerably on this issue, as do communities.
- What type of arrangement do you want with the carrier to provide the service and how long do you want it to last? For example, a letter of offer that is open ended and does not lock you in, or a freight contract for a specified period etc.

Based on the September 2006 experience of the Dampier Peninsula communities, the example in Appendix 4 shows an invitation to bid for freight services that can be sent to freight companies. Make sure you use it for *illustrative purposes only*, as your situation could be completely different.

Evaluation criteria and evaluating proposals

It is useful to set out and agree on evaluation criteria that will be used in assessing the proposals, include any weighting that might be applied. A simplified example is shown in Table 1.

Table 1 Example of evaluation criteria

Description	Weighting
Provision of required service from nominated towns/cities	25%
Priority for food and effective cold chain management	25%
Local knowledge	10%
Suitable equipment	10%
Price	15%
Clear invoicing	10%
Indigenous training/employment opportunities	5%

Each community/store needs to develop their own weighting criteria based on what is most important to them. To work out the score, rate each company at 0 to 5 where zero means they do not meet the criteria and multiply the result by the weighting factor.

On receipt of proposals it is useful to compare each company response on a table, making sure you incorporate what is important to you. Table 6 in Appendix 5 illustrates what a comparison might show.

From that table *Carrier X* does not conform to what is required, *Carrier Y* is a possibility if it makes some changes but *Carrier Z* is clearly preferred. It is prudent, when making your preferred carrier selection that you determine not only the front-runner, but also if there is another bidder who could be selected if negotiations break down with the preferred carrier. It is also important that your performance measures are built into the freight contract.

Freight contract

Once you have decided on which carrier you will select you need to decide whether you or the carrier will write the contract. It is common for freight companies to offer a contract and you will find each company has its own version of what they want. In any event the contract needs to be closely scrutinised and legal advice sought to ensure your interests are protected.

An example of a contract from a freight company is set out in Appendix 6.

Performance measurement checklist

When evaluating the performance of the freight carrier it is useful also to evaluate the supplier, and store performance, in meeting its responsibilities for supply chain effectiveness. Table 7 in Appendix 7 shows areas of key responsibility, and can be used as a checklist. It can be altered to suit specific requirements.

Figure 7 in Appendix 7 provides an example invoice that shows the breakdown of charges incurred.

This example was prepared based on the process used on behalf of the Dampier Peninsula Indigenous Stores and a private pearl farm that, faced with the cessation of their freight service, needed to replace it in a short time. The spirit of co-operation shown by all those involved is to be commended. Naturally much of the material used in the examples has been changed for commercial reasons, nevertheless the contribution made by Nexus Freight is gratefully acknowledged.

We hope that remote Indigenous communities, their stores and other remote communities and businesses find this useful as a discussion starting point when seeking a freight service, reviewing a freight contract offered and in evaluating freight service performance.

Food safety and quarantine

Acts, regulations and guidelines exist relating to the handling and temperature management of food products by suppliers, transport operators and stores to ensure food is safe and suitable. For further information go to www.foodstandards.gov.au.

In the event of food safety and quality concerns with a certain line of product, a reliable trace-back system is essential. Log books, detailed invoicing or a computerised data entry system need to be in place. In many instances Hazard Analysis Critical Control Point (HACCP) plans are not only desirable but required.

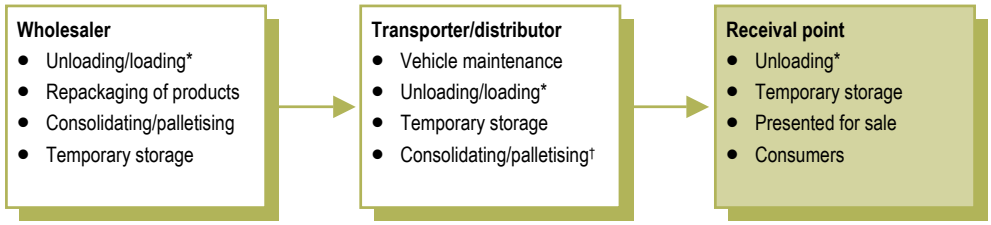
There are restrictions on the movement of plant and animal products between, and within, states/territories of Australia. Information for all mainland states/territories can be found through links in the primary industries/agriculture website. Tasmania has its own website. Details are as follows:

- mainland web link—www.pir.sa.gov.au
- Tasmania—www.dpiw.tas.gov.au
- Australian Quarantine Inspection Service—www.aqis.gov.au.

Cold chain for perishable foods to remote areas

Bearing in mind that 50% of healthy food needed by remote Indigenous communities is perishable, we need to understand and effectively manage its movement from supplier to transport to store. Typical components that are likely to operate in the supply chain for the delivery of perishable products to remote regions are illustrated below with the key activities undertaken at each step.

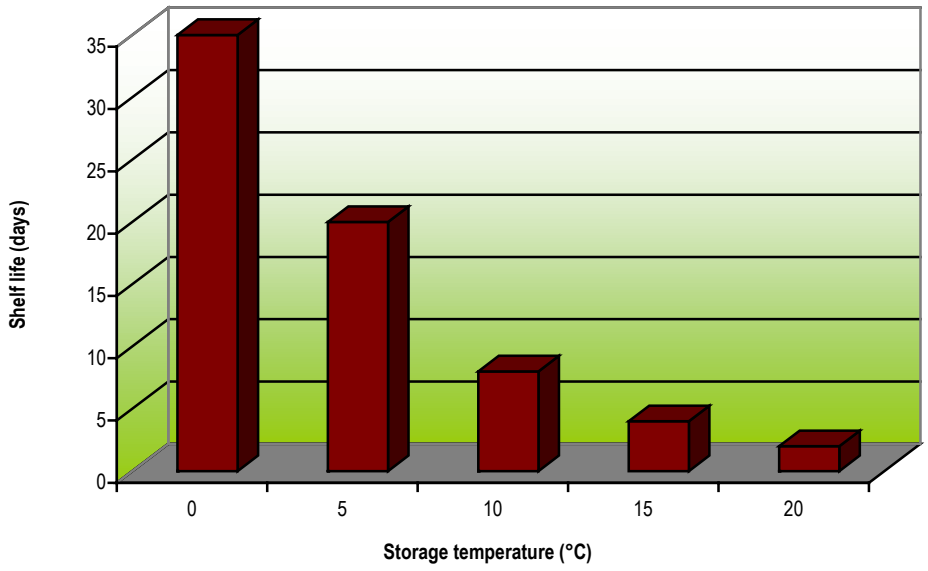
Figure 2 Supply chain for delivery of perishable products to remote regions



→ Products transported to next point in the cold chain, susceptible to breaks in the cold chain
Text Areas in the cold chain that are susceptible to breaks
* Minimise the time perishable products spend in this area
† May not be required
Source: *Transport and Handling of Perishable Products in Remote Areas of South Australia*.

Not only does temperature affect the safety and suitability of food. It also affects shelf life and that is important to communities and stores.

Figure 3 Temperature effect on shelf life of broccoli



Source: Michael Rettke, SARDI, based on Kader, AA (2002), *Postharvest Technology of Horticultural Crops*, 3rd edn, University of California, p. 426.

As you step through the supply chain you will identify the need for consolidation and packing areas, transport depots and stores to have sufficient cold room space operating at temperatures to meet the needs of fresh, chilled and frozen products—generally three separate areas.

For frozen products it is important to note that:

- frozen product should never be warmer than –18°C
- ice-cream should never be warmer than –22°C
- micro-organisms that cause deterioration and contamination of food can develop in frozen food at –7°C.

Table 2 Recommended storage temperatures used for various types of product

Product requirement	Temperature (°C)
Frozen	–18 to –22
Chilled	0 to +4
Chilling sensitive	+8 to +10

Source: *Transport and Handling of Perishable Products in Remote Areas of South Australia*.

Consolidation/packing areas, transport depots and stores also need to:

- ensure refrigeration equipment is working properly and that temperature gauges, thermometers and probes are accurate
- load product in drop order to minimise product exposure to ambient temperature
- use insulated pallet covers (see below) to protect product from ambient temperatures—put them on as the product comes out of the temperature-controlled area and vice versa

Source: Thermo Cap Pallet Cover, Sud-Chemie

- handle perishable products in a temperature-controlled environment, including during the pick and pack/palletisation of mixed products
- use exhaust fans to flush any ethylene build up out of enclosed areas
- have sealed temperature-controlled loading docks to load/unload transport to minimise temperature fluctuations. Keep the truck or container refrigeration unit turned on when loading in these circumstances

  OR

- where temperature-controlled loading docks are not available, load/unload trucks directly under paved shaded areas. Keep the truck or container refrigeration unit turned off when loading in these circumstances but make sure it has been pre-cooled to ambient
- use electric forklifts or forklifts fitted with catalytic converters to reduce ethylene emissions
- use temperature checking and monitoring as a standard operating procedure—check product temperature on pick-up and delivery, and check truck/container temperature on pick-up and delivery
- understand how to handle mixed deliveries and decide how products will be separated into a single load or across multiple loads. Separation choices should primarily be made on the temperature requirement of the product (i.e. frozen, chilled, chilling sensitive) and secondly on sensitivity to odour contamination and ethylene production (see Table 3)
- signs that product has been affected by poor cold chain management include
  - watermark stains on a carton—a sign of product thawing
  - discoloration/pitting of produce—a sign of chilling injury.

Table 3 Ethylene sensitivity

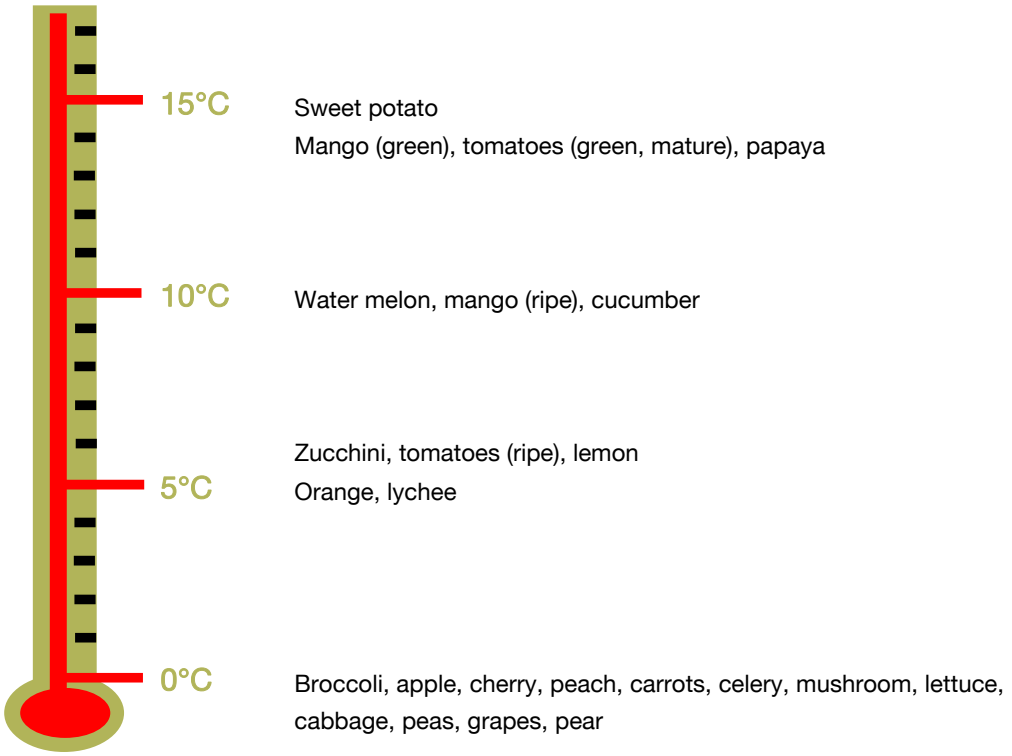
Producers	Sensitive to ethylene		Neither
Apples	Avocado (green)	Asparagus	Beetroot
Avocado (ripe)	Bananas (green)	Beans	Capsicum
Bananas (ripe)	Kiwifruit	Broccoli	Cherry
Mango	Lemon	Cabbage	Garlic
Papaya	Orange	Carrots	Grape
Peach	Rockmelon	Cauliflower	Mushrooms
Pear	Watermelon	Celery	Onion
Rockmelon		Cucumber	Pumpkin
Tomato		Lettuce	Strawberry
		Peas	
		Potato	
		Zucchini	

Source: Michael Rettke, SARDI.

Effect of poor cold chain management
Source: Michael Rettke, SARDI

It is vital that you do not take short cuts that will compromise temperature guidelines.

Figure 4 Temperature guidelines



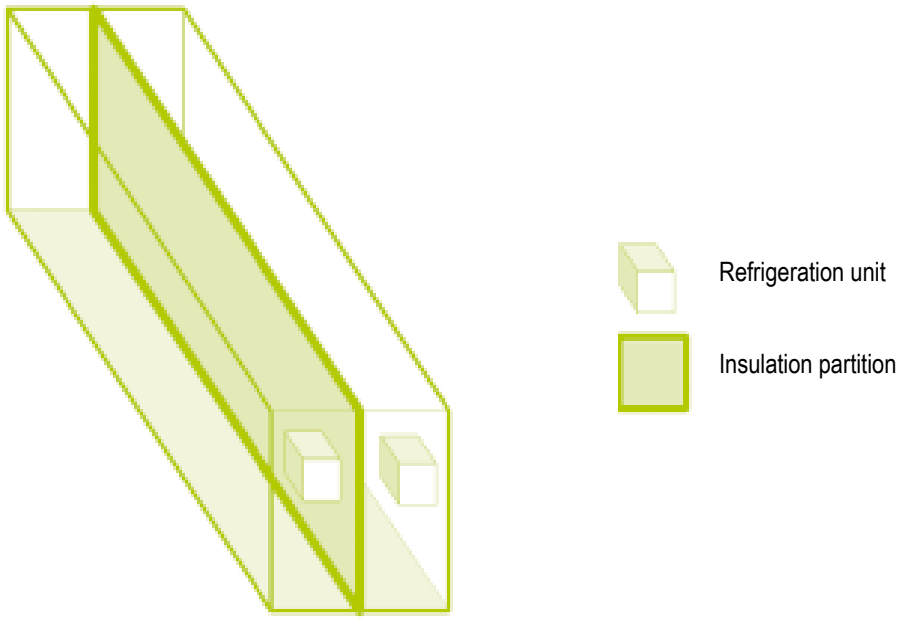
Source: Michael Rettke, SARDI

Mixed temperature loads

Refrigerated trucks can be partitioned for mixed temperature loads. Equipment has to be installed so that temperatures can be set and maintained in each compartment to keep product at the correct temperature. Various configurations are possible, each with their unique advantages/disadvantages.

- Side-by-side temperature container or pantechnicon trailer design (see Figure 5)
  - advantage: single rear-door access for loading, from loading docks
  - disadvantage: special pallets or hand loading required to match fixed compartment size.
- Multi-temperature container/pantechnicon trailer with partitions (see Figure 6):
  - advantage: variable compartment size possible
  - disadvantage: need multiple doors for side entry, which is more difficult to load, and makes loading from insulated docks more difficult.

Figure 5 Side-by-side temperature container or pantechnicon trailer design



Source: *Transport and Handling of Perishable Products in Remote Areas of South Australia.*

Figure 6 Multi-temperature container/pantechnicon trailer with partitions

Source: *Transport and Handling of Perishable Products in Remote Areas of South Australia.*

Perishable product temperature and handling instructions need to be pre-established by the store with the supplier and transport operator and communicated with the order as standard practice.

The potential damage that your product can incur while in transport needs to be clearly understood, and goods need to be packed appropriately for protection. Packing is also important, both in maintaining product temperature and as a means of preventing one product contaminating another. It is vital that suppliers, transport operators and stores determine the most appropriate, cost-effective packaging solution. Packaging suppliers are also a good source of information

Tables 9 to 11 in Appendix 9 indicate best practice.

For temperature product handling pocket guides and wall charts go to www.coldchaincentre.com.au/cold-chain-product.php.

Freight quality management

If you are seeking an accredited quality cold chain management system it is worth checking out the Australian Logistics Assured program run by the South Australian Freight Council www.australianlogisticsassured.com.

Indigenous community store customers deserve healthy food that is safe, suitable and of a quality that they can enjoy. This requires management of the product from source to store to ensure that it is supplied, transported, handled and put on the shelf in good condition.

Some of the things you could consider might be:

- making sure the specifications of the product being ordered are clear, specific and agreed
- seeing that the product is fit for human consumption and not contaminated
- specifying temperature requirements:
  - for example, product temperature must be maintained within 5°C +/-2°C at all stages within the supply chain
- keeping cold chain breaks to a pre-agreed minimum
- maintaining clear records along the supply chain and keeping them in a manner that readily allows traceability
- ensuring temperature recording and monitoring devices are accurate and regularly calibrated
- using data loggers to monitor chain performance for every shipment or, where that is not practical, at least one shipment per month
- making sure that where the data logger does not have time/temperature/location automatically recorded then the time of pick-up, transfer and receipt is recorded, so you know where problems have occurred
- making sure a copy of the trip log is forwarded with the data logger for analysis
- ensuring cartons containing data loggers are clearly marked, for example by purple tape, to make data logger retrieval easy
- making sure that stores are collecting and returning data-loggers for analysis at the agreed analysis point
- making arrangements for data logger analysis and exception reports to be done, preferably by an independent third party.

Mapping your supply chain in terms of activity, temperature and time can be extremely useful. You need to do it with your supply chain partners to ensure accurate information is used. It will also help you identify where cold chain breaks occur, and for how long, and that enables you to take appropriate steps to see that the time your product is exposed to ambient temperature does not affect product quality.

Once you have mapped your chain get your supply chain partners to sign it off and agree to use their best endeavours to meet the performance markers described in it.

For example:

> The following companies and organisations have worked together to describe key steps and actions in the perishable food supply chain from Adelaide to XYZ. All participants agree that meeting the performance criteria is reasonable and without prejudice commit to using their best endeavours to achieve them.
>
> | | | | |
> |---|---|---|---|
> | Ms CCC | Manager | The Orange Growing Company | Signature _____ |
> | Mr AAA | Manager | The Supermarket | Signature _____ |
> | Mrs DDD | Manager | Reliable Freight Co | Signature _____ |
> | Mr GGG | Manager | Fresh Food Store | Signature _____ |
> | Mr VVV | CE | The Healthy Community | Signature _____ |

The more detailed your map, particularly if backed up with an agreed HACCP plan, the better, because it then becomes a template for standard operating procedures. There is a *simplified* example of what a map might look like in Appendix 10.

Freight information sources

The Australian Food and Grocery Council (www.afgc.org.au) sells two helpful publications dealing with cold chain management. These are:

- *The Australian Cold Chain Guidelines 1999: For the handling, storage and transport of frozen foods, ice-cream and chilled foods for retail sale and in food service outlets*

  The cold chain consists of a series of businesses engaged in manufacturing, transporting, storing, retailing and serving chilled and frozen foods, as well as the consumers who buy those products. *The Australian Cold Chain Guidelines* and its companion volume, *The Australian Cold Chain Food Safety Programs*, seek to strengthen the cold chain by recommending practices for each link from manufacturer to consumer to ensure the safety and quality of chilled and frozen foods.

- *The Australian Cold Chain Food Safety Programs 1999: For the handling, storage and transport of frozen foods, ice-cream and chilled foods for retail sale and in food service outlets*

  This publication provides reference material for participants in the cold chain to develop food safety programs in accordance with the Australia New Zealand Food Authority (now Food Standards Australia New Zealand) Australian Food Standards Code. It is a companion volume to the principal cold chain document *The Australian Cold Chain Guidelines* and contains guidance on the preparation of food safety plans based on Hazard Analysis and Critical Control Point (HACCP) principles and related technical information.

For a description of jobs in transport and career paths The Logistics Information and Navigation Centre is an excellent website worth visiting www.the-linc.com.au.

There is also a range of other places you can go to find out more about freight including:

- Australian Logistics Assured—www.australianlogisticsassured.com
- the SAFC Cold Chain Working Group—www.safreightcouncil.com.au
- the South Australian Department of Transport and Urban Planning for information on group freight buying—
  www.transport.sa.gov.au/pdfs/freight/LAMP_update/GroupFreightBuyingGuidev142July2.pdf
- the National Rural Health Alliance—nrha@ruralhealth.org.au or 02 6285 4660
  - for Group Freight Profiler software model and instructions
  - for general information produced in the Toolkit
- Rick Copping or his associates at PKF International, for information on a truck cost model—rick@pkfmb.com.au.

PART B PRACTICAL EXAMPLES

Appendix 1 Freight management

Complete the following checklist on freight services in your area. Your answers will tell you who provides your services, whether the recommended standard of a weekly delivery of fresh, chilled and frozen food is being met, how long it takes to get to you and how it gets to you. If you have answered 'don't know' you need to get the answers.

Table 4 Freight services checklist

Question	Examples	Your comment
What transport companies offer, or could offer, freight services to your community?	• Don't know • One • Two • More: specify number	
What transport companies currently provide freight services to you and from where?	• Don't know • XYZ from Darwin • 123 from Perth • ..... from Alice Springs	
How long does the journey take?	• Don't know • About X hours/days	
How frequently do they deliver • dry freight? • fresh/chilled/frozen?	• Don't know • XYZ dry weekly • 123 refrigerated fortnightly • ..... weekly refrigerated and dry	
How many drop offs does the company make before delivering your goods?	• Don't know • About X • 3 at	
Do you know if and where your goods get transferred from one operator to another?	• Don't know • It doesn't change company • At the wharf • At the XYZ depot in KLMBA from 123 company	
Is there a break in keeping products refrigerated during transfer and if so how long is it?	• Don't know • No • Yes • 1 hour • 2 hours • Other specify	

Appendix 2 Improving organisation and transparency

It is important that any freight arrangements entered into are based on merit, are rational and are 'above board'. Ensure that the freight selection process is transparent and is reviewed by an independent third party or committee. Table 5 identifies potential gaps in your current arrangements.

Table 5 Improving organisation and transparency checklist

Question	Examples	Your comment
Who selects the transport operator(s) that deliver goods to the store?	• Community Council • Community Council's agent • Store manager • Supplier • Other	
What arrangements are in place with the transport company(s) on price and service?	• None • Word-of-mouth agreement • Freight contract with no time limit • Period freight contract for – 1 year – 2 years – 3 years	
What service level agreements do you have with the freight company(s)?	• None • None—no choice • They know if they don't perform we will get someone else • Written agreement clearly setting out what the supplier, transport company and store will do • Legally binding contract with non-performance penalties	
How frequently do you review your freight arrangements?	• Never • Only when the company increases its rates • Annually • Every 2 years • Every 3 years	
Do you have an independent review mechanism in place to ensure the freight arrangements are merit based and transparent?	• No • Yes • Done by Chief Executive of community and store manager • As above, plus independent third party with experience in freight	
Is the price paid reasonable?	• Yes, as determined by open tender • Yes, demonstrated by using truck cost model	

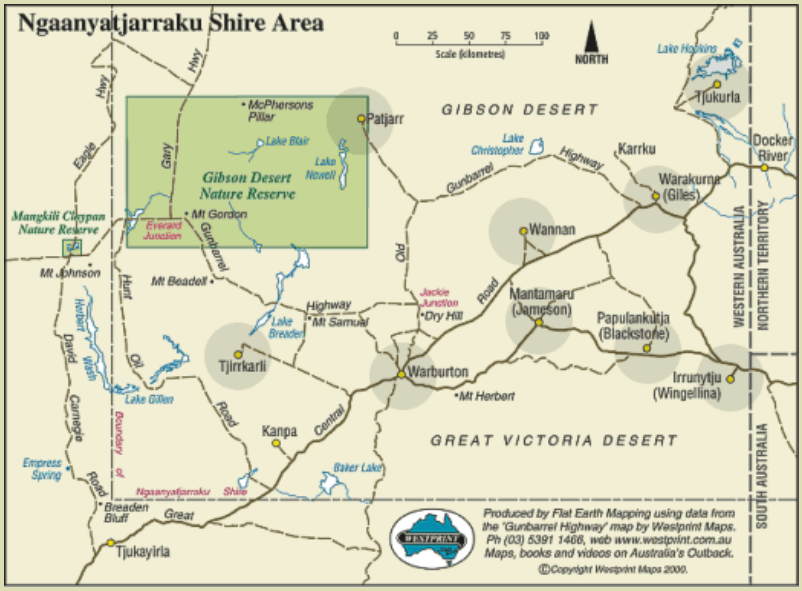
Appendix 3 Group freight buying techniques

Group freight buying works on a simple principle that involves combining volumes to fill the transport unit on a geographically logical freight route where trucks and/or barges are not at full capacity.

The following case studies provide examples of differing options.

Case study 1 Arnhemland Progress Association (ALPA) and Ngaanyatjarra Agencies and Transport Services (NATS)

When the agency was set up there were only five communities associated with the Ngaanyatjarra Council. Warburton Store did its own buying from Kalgoorlie and Perth and everything was carted to Warburton by the late Dennis Meaker in the old Leyland rig. The other communities were serviced by Nganampa Transport from Adelaide. Warburton found suppliers were just too far away and radio communications just too unreliable. There had to be a better way. The other communities were not too happy with their supply situation either, Jameson in particular. They were at the end of the run. Their goods frequently arrived scattered all around the empty pantech. Nganampa Transport was also having financial difficulties.

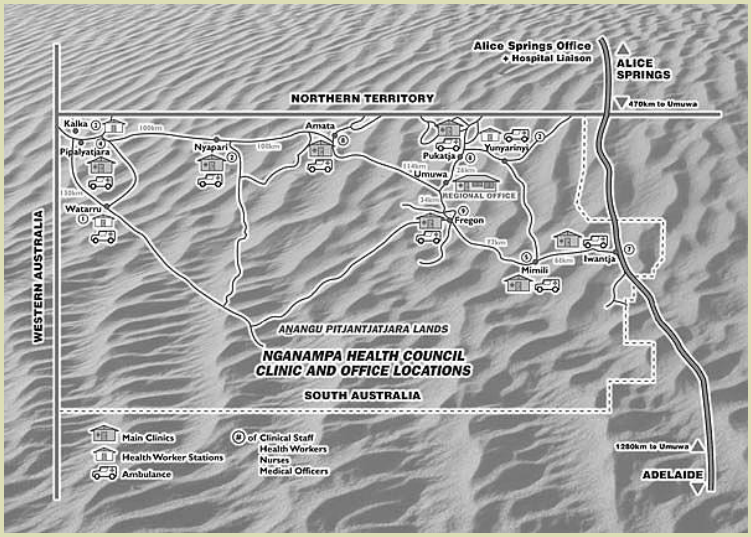


Joseph Williams, then Manager of Warburton Store (Milyitjarra Aboriginal Corporation), was asked to set up an agency in Perth and handle the buying for all the Ngaanyatjarra communities. The present warehouse is wholly owned by the agency and has been added to recently, enabling loading to be carried out entirely under cover with security. It is part let to Pinakis Refrigeration. The agency now serves twelve communities regularly, while its services are occasionally called on by communities across the border and in the Pilbara region.

There is a fortnightly freezer truck service and a dry goods truck every two weeks to Warburton, Jameson, Blackstone, Wingellina and Warakurna, which have a chiller-box for fruit and vegetables. There is no mark-up on fruit and vegetables, building supplies, and motor vehicles. Most of the original client stores contributed to the agency float. Each contribution was based on a 'two-week purchase' basis. As other community stores joined the group they also added to the float. This cash reserve is evidence to suppliers of the agency's buying power.

Case study 2 Anangu Pitjantjatjara Yankunytjatjara Lands

The Mai Wiru Regional Stores Policy is an Anangu community initiative for health and wellbeing on the Anangu Pitjantjatjara Yankunytjatjara Lands (APY Lands).



Negotiation of a system for the bulk purchasing of supplies

The purpose is to get control over the cost drivers, the factors that drive up costs in the stores, through creating economies of scale, a better system of supply and better terms of trade for stores on the Lands. There are three main food suppliers in Australia—Woolworths, Coles and the Metcash group. Metcash have committed to negotiations with the Stores Support Unit to develop a preferred supplier agreement anticipated to operate for at least two to three years at a time. A Stores Forum meeting at Umuwa on 23 October 2004 endorsed these negotiations. The meeting also received information about the Arnhem Land Progress Association (ALPA) stores management model.

A co-ordinated freight system

The Stores Support Unit has negotiated a co-ordinated freight system to supply freight needs of community stores and other stakeholders on the APY Lands, to reduce costs and improve supply systems. The freight system has been negotiated with existing and potential suppliers and in consultation with the preferred bulk supplier, for the best possible outcomes for communities. A preferred transport company has been recently selected. Freight charges have been equalised across all community stores. A position of Retail Support Manager has been established to, in part:

- negotiate and maintain all trading terms with freight operators
- establish group purchasing arrangements for both supplies and freight
- pursue industry partnerships with relevant suppliers
- develop close working relationships with suppliers and freight operators
- develop close working and supportive relationships with all the store managers to provide assistance in problems of supply, freight, store management requirements and human resource management and build contingencies for emergencies
- ensure freight rates are accurately maintained in relation to Mai Wiru Regional Stores Policy
- ensure freight providers are meeting contractual obligations and continue to seek improvements to the freighting of goods into the stores
- manage all contracts and service providers to ensure contractual maintenance programs are implemented as per schedules and agreements such as refrigeration, pest control, security alarm monitoring systems, cleaning etc
- liaise with other similar retail providers in isolated communities to share knowledge and skills and, when required, to create joint purchasing agreements to ensure maximum buying power.

Case study 3 The Arnhem Land Progress Association

The Arnhem Land Progress Association (ALPA) is an Aboriginal-owned benevolent organisation that provides benefits to its members from the successful operation of community retail stores. ALPA was established in 1972 as a co-operative of community stores in seven Arnhem Land communities. It operates a successful retail enterprise, with a turnover last financial year of $29 million. It is one of the largest financially independent Indigenous employers in Australia, and the third largest retailer in the Northern Territory. Profits are re-invested into the business and communities.

ALPA has come a long way in thirty-three years—from small, counter sales stores in tin sheds, to fully self-service, air-conditioned stores offering a range of products available in remote communities. It has five member stores in Arnhem Land: Minjilang, Millingimbi, Ramingining, Gapuwiyak and Galiwin'ku. ALPA's consultancy service, Australian Retail Consultants, manages eight other community stores across the Top End.

Australian Retail Consultants

To guarantee a reliable supply of competitively priced quality products, Australian Retail Consultants has a well-developed network of wholesalers, distributors and transport companies, both local and interstate, with a choice of suppliers available to meet the specific needs of clients. This is a crucial element in the success of the organisation, with the majority of its enterprises servicing regions that are remote and inaccessible. Quality control of both the merchandise and transport services—including air, barge and road—is paramount to ensure the timely delivery of fresh produce, meat, milk and other commodities.

Appendix 4 Example invitation to provide freight services

The following is based on the September 2006 experience of the Dampier Peninsula communities. It is an example of an invitation to bid for freight services that can be sent to freight companies.

Background

An existing carrier currently provides a weekly service ex Broome to stores and communities on the Dampier Peninsula. It plans to withdraw its services in September 2006. Accordingly a replacement service is being sought by way of this invitation.

Freight service requirements

Information and questions of relevance to companies invited to provide a freight service to the Dampier Peninsula are as follows.

Service frequency

A weekly freight service for whitegoods, gas bottles, dry goods, fresh, chiller and frozen goods and building materials is required each Thursday all year round. Can you provide this?

Locations to be serviced from Broome

- Beagle Bay
- Lombadina
- Djarindjin
- One Arm Point
- Cygnet Bay
- Cape Leveque

Locations to be serviced into Broome

Stores source product from Broome, Perth and Darwin. Please indicate your capability to provide this service including your ability to do pick-ups and/or receive goods at your depots.

Estimated weekly volumes

Set out below are indicative average freight volumes for delivery to stores and Cygnet Bay Pearl Farm. Freight volumes to clinics and schools and other locations on the peninsula have not been included.

Estimated weekly average freight volumes

Carrier to verify by contacting stores.

Place	Dry	Fresh/chiller	Frozen
Store 1	4 pallets	2 pallets	2–3 pallets
Store 1	3500 kg	1000 kg	1500 kg
Store 2	2 pallets	½ pallet	½ pallet
Store 2	1000 kg	500 kg	500 kg
Store 3	3 pallets	1 pallet	2 pallet
Store 3	2200 kg	500 kg	1300 kg
Store 4	3 pallets	3 pallets	2 pallets
Store 4	2200 kg	1500 kg	1200 kg
Store 5	Nil	2 pallets of chiller/freezer	
Store 5		250 kg	250 kg
Store 6	1 pallet	1 pallet	1 pallet
Store 6	800 kg	700 kg	800 kg
Total	13–14 pallets	9 pallets	10 pallets

During the wet these volumes may reduce by about one-third.

Stores contact details

Store 1	Annie or James	Tel
Store 2	Janet	Tel
Store 3	Francis	Tel
Store 4	Brenda or Brenton	Tel
Store 5	Ian	Tel
Store 6	Marlon	Tel

Depot arrangements

Please indicate what arrangement you will put in place to consolidate and transfer product in Broome for on-carriage to the Dampier Peninsula.

What depot arrangements will you have in Perth and Darwin?

Please describe facilities at the depots.

Reliability

Please indicate what steps you will take to ensure the service is reliable and will deliver on time and in full.

Priority

Will you provide priority to stores freight over other freight, and perishables and foodstuffs?

Service strategy

A significant proportion of the road network from Broome to the Dampier Peninsula is unsealed. Over mass heavy vehicles require a permit to operate on these roads and information is available from the Broome Shire Council and WA Department of Transport. During the wet the roads may become impassable—please indicate what strategy you will use to manage this.

At other times the roads can be rough, corrugated, dusty, sandy and contain wash-aways. What strategy will you use to manage not only getting through but also protecting the freight from damage?

Will the equipment used to carry the freight be:

- covered, dustproof and waterproof?
- clean and odour free inside so goods loaded are not adversely affected?

What steps will you take to ensure equipment used is able to handle the road conditions?

Cold chain management

Please provide information on cold chain management procedures you will put in place to ensure perishable product safety, suitability and quality.

To what extent will they meet or be better than the following steps:

- keeping fresh, chilled and frozen goods at temperatures never warmer than -22°C for ice-cream, -18°C for frozen, 0°C to + 4°C for chilled and +5°C to +12°C for fresh
- ensuring the refrigerated trailer is suitably configured to allow for maintenance of these different temperatures
- ensuring that where perishable product is loaded in ambient temperatures the inside of the refrigerated truck is pre-cooled to that temperature

- it is understood that the refrigeration equipment needs to be turned off during loading and unloading in ambient to avoid icing of coils and accumulation of moisture. What procedure do you follow?

- keeping on-carriage cargo at temperature during the transfer loading/unloading process
- ensuring refrigerated goods exposed to ambient for more than half an hour are protected such as by an effective insulated pallet cover put on while awaiting loading or on delivery before transfer to the cool room
- ensuring refrigerated cargo is stowed in drop order to minimise cargo exposure to ambient conditions
- having the driver assist with loading and unloading
- recording the temperature of goods received for loading, the inside truck temperature to see if it is cool enough, the truck temperature during the trip and at delivery and also the goods temperature when delivered to the store
- ensuring that temperature measurements are countersigned by the supplier and the receiver with a through journey copy being retained by the carrier and a copy provided to the consignee
- ensuring that depot transfer time and temperature will also be recorded on the above time-temperature log
- making temperature data loggers available for use to check transport and supply chain integrity and performance.

Damage and spoilage claims

What policy do you have to meet claims for goods damaged or spoiled in transport? What evidence is required, what process do you follow and in what time frame can a claim be expected to be settled.

Dispute resolution

What dispute resolution process do you propose?

Skills, training and employment opportunity

What is your policy on transferring skills and knowledge to Indigenous community members in terms of supply chain and cold chain operations? Do you offer opportunities for suitably trained Indigenous people to gain casual, part-time or full-time employment?

Freight contract arrangements

Please provide details of price and service in your offer, the basis on which you will charge, what contractual arrangements you would want and the basis for freight charge increases and surcharges. Where a surcharge applies please provide the reference point, e.g. cost of fuel.

Please include any depot handling charges in the event that you are using a third-party depot.

Please indicate the mass/cubic charge policy you apply.

Please show charges for a per kilo rate, a pallet rate and a truck-load rate.

Please show pick-up charges.

Please advise trading terms.

Please provide an example of your freight invoice.

Please indicate minimum service standards you will commit to and/or want stores to commit to. How will these be objectively measured?

Please indicate the term of the contract you are seeking and the review periods for price and service. You may choose to provide options such as a two-year contract with an annual price review and six-monthly service reviews or some other period.

Evaluation of bids

The Dampier Peninsula Stores Committee will evaluate bids and use the following weighting scale:

Description	Weighting
Provision of required service from nominated towns/cities	25%
Priority for food and effective cold chain management	25%
Local knowledge	10%
Suitable equipment	10%
Price	15%
Clear invoicing	10%
Indigenous training/employment opportunities	5%

Details for lodging your freight service offer

Please submit your offer by email to Dampier Peninsula Stores Committee at [address] or by mail to [postal address]. If you require further information please phone [contact name and number]. Please note that any information provided to your company before bids close may also be sent to other bidders.

Offers should be submitted no later than COB [date].

Terms of the invitation

Please note that no liability is accepted by the Dampier Peninsula Stores for any information that is supplied in this invitation. The cost of preparing and submitting the response to this invitation will be solely borne by the company making the offer. The Dampier Peninsula Stores reserve the right to withdraw the invitation to provide services and are not bound to accept any proposal submitted if it chooses.

Appendix 5 Evaluating criteria and evaluating proposals

On receipt of proposals it is useful to compare each company response on a table, making sure that you incorporate what is important to you (see Table 6).

Table 6 Example comparison of proposals

Description	Carrier X	Carrier Y	Carrier Z	Criteria/comment
Weekly service	Yes	Yes	Yes	Provision of required service from nominated towns/cities Carrier Y and Z
Thursday	Tuesday	Yes	Yes	
Local knowledge	Yes	Yes	Yes	
Perth – Broome service	Yes	Yes	Yes	
Perth pick-up and delivery of dry goods and freezer chiller products	Dry only	Yes both	Yes both	
Darwin – Broome service	No	Yes	Yes	
Darwin pick-up and delivery of dry goods and freezer chiller products	No	Dry yes Freezer chiller IGA only	Yes both	
Broome pick-up and delivery of dry goods and freezer chiller products	Yes	Yes	Yes	
Broome depot	Yes	Yes	Yes	
Wet strategy	None	Smaller truck	Smaller truck	
Equipment to be used	Chiller van and gates/ tarp trailer	Freezer van and taut liner trailer	Freezer and chiller semi—side and rear access Pantech trailer	Suitable equipment Carrier Z
Priority for food	Probably	Yes	Yes	Food priority Carrier Y and Z
Cold chain management system	None	Carrying temperature of -20°C for freezer and +2-4°C for chiller. Truck temperature record kept.	ISO 9001 system in place. Carrying temperature of -22°C for freezer and +2–4°C for chiller. Temperature data loggers used regularly to check chain performance and info provided to stores and suppliers	Carrier Z, Carrier Y not cold enough for ice-cream.
Pallet covers	None	Will get them	Currently use them	Carrier Y and Z
Reject out-of-temperature product at pick-up and at Broome depot	No	Yes	Yes by request	Carrier Y and Z

Description	Carrier X	Carrier Y	Carrier Z	Criteria/comment
Temp checking and recording	None	Spot checks	On receipt and delivery, noted on con note	Carrier Y and Z
Claims	Nil	Per consignment $250 freezer/chiller $500 dry	Ex gratia basis	Carrier Y and Z—discuss with them
Contract term	None	1–3 years	1–3 years	Carrier X, Y and Z
Indigenous training and employment	Not offered	Yes	Yes	Carrier Y and Z
Credit	14 days	14 days	30 days	Carrier Z
GST	10%	10%	10%	Carrier X, Y, Z
Depot charge	Not Included	Included	Included	Carrier Y and Z
Fuel surcharge	16%	12%	10%	Carrier Z
Rates	Indicative only based on full truck load only	Fixed for 12 months then 6 monthly reviews	Fixed for 12 months then 6-monthly reviews	Carrier Y and Z
Pick-up charges	Extra	Included in rate	Extra	Carrier Y
Cubic metre/tonne	3 cubic metres	3 cubic metres	3 cubic metres Pallet size 1.2m x 1.2m x 1.4m high = 2.016 metres cubed. When multiplied by 333 to convert to cubic kilos, this is equivalent to 671 kilos. If deadweight is 500 kilos, the consignment will be charged at 671. If the deadweight is 800 kilos, consignment will be charged at 800 kilos.	Carrier X, Y, Z
Basic charge	$12	$15	$10	Carrier X
Min charge	None	$30	$0	Carrier Z
Clear invoices	No	Needs to be checked against manifest	Yes	Carrier Z (see Figure 7 in Appendix 7)
Service includes, dry, fresh, chiller, freezer, whitegoods and gas bottle capacity	No freezer	No gas bottles	Yes	Carrier Z
Local knowledge	Yes	No	Yes	Carrier X and Z

Appendix 6 Example freight contract

Once you have decided on which carrier you will select you need to decide whether you will write the contract or the carrier will. It is common for freight companies to offer a contract and you will find each company has its own version of what they want. In any event the contract needs to be closely scrutinised and legal advice sought to ensure your interests are protected.

An example of a contract from a freight company is set out below.

FREIGHT CONTRACT BETWEEN Z CARRIERS PTY LTD, TRADING AS Z EXPRESS FREIGHT

and

DAMPIER PENINSULA FREIGHT USERS, SPECIFICALLY STORE 5

The parties hereby acknowledge that they have mutually agreed a contract period of a minimum of one year, with a three-year option to extend to a total of three years. The purpose of the extension is to allow for future equipment upgrades of a significant nature, for the ongoing and continued transport of food, beverage, goods and materials between Perth, Darwin and all sites on the Dampier Peninsula.

The agreement is based on the expectation of harmonious co-operation between the parties, prompt payment and mutual efforts to ensure the smooth running of the operation, including regular monitoring of various KPIs as listed in Attachment B.

In the event a major problem arises by or for either party, formal written advice relating to the problem is to be issued. In which case the other party has 30 days within which to satisfactorily address the problem. Should the matter not be resolved at that time, then the aggrieved party may issue a 30-day notice of intention to discontinue the contract if it so wishes. Each party to the contract fully understands that cessation by one could, but will not necessarily, impact on others, possibly leading to a cessation of transport services by Z Express Freight.

Prices and conditions are agreed, as shown in Attachment A, and are based on the conditions shown below.

- Peninsula freight rates have been reduced by 5% from the rates quoted in our submission. This reduction has been made in recognition of the consistent work we understand is now being undertaken on the Dampier Peninsula road. This reduction will remain in place unless work on the road ceases and road conditions deteriorate.

- Rates quoted are firm for one year from the commencement date of 19 October 2006, with the exception of fuel surcharges, which can be varied up or down in line with fuel movements at short notice.

- The current fuel surcharge (10%) is based on our purchase price of fuel in Perth and Broome, currently $1.2294 and $1.2903 respectively as at 25 September 2006.
- Commencement date will be 19 October 2006.
- When the option to extend the freight service contract is taken up after the first year, the existing rates will then be subject to revision, followed by six-monthly revisions thereafter, in line with the Z Express Freight escalation/de-escalation clause, which is set out in Attachment C.
- Insurance is not included in the freight rates other than the Limited Liability Waiver as described in our submission. This service will be charged for if not declined in writing at the time of opening the account. If stores wish to arrange Marine Insurance because they do not have an arrangement in place, on written request and providing Z Express Freight with details of turnover and maximum value for any one shipment, Z Express Freight is prepared to seek competitive quotations for full freight insurance through its broker.
- The Z Express Freight normal terms and conditions of transport, as they appear on the reverse side of its consignment notes, apply to our transport services, including cubic conversion at 3 metres cubed equals 1 tonne. Cubic Formula—example: pallet size 1.2 m x 1.2 m x 1.4 m high = 2.016 metres cubed. When multiplied by 333 to convert to cubic kilos, this is equivalent to 671 kilos. If the deadweight is 500 kilos, the consignment will be charged at 671. If the deadweight is 800 kilos, the consignment will be charged at 800 kilos.
- GST is additional to listed prices.
- Z Express Freight is to undertake all freight movements between Perth and Broome, and Darwin and Broome in addition to Broome to the Peninsula.
- Should any misunderstanding, misinterpretation or dispute arise, it will be settled by reference to the information provided within this document and the submission document dated 6 September 2006.
- Should the documents not clearly resolve the issue, the 30-day formal grievance option can be applied.

For and on behalf of **Store 5**, being duly authorised to bind, I/we agree to the above terms, conditions and appendices:

Community Chairperson or Chief Executive

Signature: _____ Position: _____

Name: _____ Date: _____

Store Manager

Signature: _____ Position: _____

Name: _____ Date: _____

For and on behalf of **Z Express Freight**, being duly authorised to bind, we agree to the above terms, conditions and appendices:

Signature: _____ Position: Managing Director

Name: _____ Date: 28 September 2006

Other general notes of interest

I would like everyone to be comfortable with the fact that Z Express Freight wish to provide an exceptionally high level of service. Nothing can be perfect 100% of the time, but we will put in the big effort, and in particular, we will endeavour to react quickly and efficiently in the event of a significant difficulty—sometimes it is how problems are approached and fixed that shows the mettle of an organisation, or the individuals in it.

Empty pallets will be returned to the supplier at no charge, however it is the store's responsibility to consign pallets back to their supplier and to record the pallet numbers shipped on a no charge Z Express con note specifying the pallet brand—e.g. Chep, Loscam or unmarked/plain. Z Express will not take responsibility for any missing pallets.

With regard to gas bottles and construction materials, please give the Broome depot early warning (minimum of one week preferred) of shipment quantity and items and frequency. Gas bottles cannot be carried in a food trailer and special arrangements must be made. Due to road conditions we will not have a 'belly box' on the food trailer.

Finally, in our submission I made mention of passing on a rebate in the form of a reduced increase (or even a decrease if warranted) after the 12 month contract expires, if the maintenance costs come in under budget. This continues to hold true despite the 5% reduction mentioned earlier in this document.

We look forward to, and hope for, a long and mutually beneficial business association.

Kindest regards

Managing Director

Attachment A Freight rates

Perth to Broome	General	A cents per kilo
	Freezer chiller	B cents per kilo
Darwin to Broome	General	C cents per kilo
	Freezer chiller	D cents per kilo

A basic charge of $10.00 and a minimum charge of $30.00 apply to the above rates. 3 metres cubed per tonne cubic conversion ratio, as applicable.

Broome to Peninsula	Freezer/chiller/dry	E cents per kilo
Broome to all destinations	Freezer/chiller/general	F cents per kilo

A basic charge of $10.00 and a minimum charge of $30.00 apply to the above rates. 3 metres cubed per tonne cubic conversion ratio, as applicable.

Pick-up charges

No pick-up charges apply to consignments delivered to Z Express depots that are located as follows:

Perth:

Darwin:

Broome:

By maximising supplier deliveries to Z Express depots pick-up charges can be avoided.

Pick-ups can be arranged by contacting the depot where the pick-up is required. Pick-ups by semi-trailer are based on time taken for pick-ups from depot to depot.

The following charges apply:

Broome	Semi-trailer pick-ups	$G per hour
	Smalls	$H for first 100 kg; thereafter I cents per kg
Perth	Semi-trailer pick-ups	$J per hour
	FAL and smalls	$K for first 100 kg; thereafter L cents per kg

Attachment B Key performance indicators (KPIs)

Weekly service	Yes, subject only to road closures
Double side doors on van and rear door	Yes
Air bag suspension	Yes, on trailer
Drop order loading	Yes, subject to freight being at depot on time, and freight compatibility to avoid damage
Scheduling ex Darwin and ex Perth	OK subject to ordering by customers • Freight ex Perth should leave on Friday or Monday to meet the Peninsula service for consolidation in Broome on Wednesday and delivery on Thursday • Freight ex Darwin should leave Darwin Monday to meet the Peninsula service for consolidation in Broome on Wednesday and delivery on Thursday. If other arrangements are required contact Z Express Freight
Consignments on time/in full	'On time' depend on suppliers delivering on time, or alternatively having cargo ready for pick-up on time. 'In full' depends in part on order sizes eg if one store orders 7 pallets of soft drink, that may well require Z Express to contact the store and with the store's agreement send part of the shipment, by arrangement. Re 'On time' I am advised that the current carrier sometimes has had to go back two and three times to some suppliers. We will not be going back after the first and agreed pick-up time as it makes it impossible to load correctly and in logical drop order and it increases customers' pick-up costs. It is imperative that the suppliers are advised of the need for them to have pick-ups (or deliveries to our depot) ready to meet the agreed time frame and that they adhere to them so that this service operates as efficiently as possible.
Carry over freight agreed	Where there is need to carry over freight because of peak freight loads exceeding predicted capacity, Z Express will contact the store(s) and advise them of the situation and by mutual agreement arrange for carry over of freight to the next service.
Advice of short delivery pre-delivery	Yes
Double stacked pallets	Logic will be used in loading to minimise damage.

Data loggers	Can/will be used as required/requested. These can be supplied by Z Express, and we have downloading software. Any lost/unreturned data loggers will be charged to the store/customer who requested use of same.
Conveyance to meet Food Standards	Yes
Invoicing separation of costs	Yes, our invoices show distinctly freight cost, fuel surcharge, pick-up charge, Limited Liability Waiver for those who retain this cover. GST appears at the end of the invoice.
Store unloading times	Beagle Bay 1.25 hours Lombadina 0.75 hours Djarindjin 1.25 hours One Arm Point 1.5 hours Cygnet Bay 0.25–0.5 hours Cape Leveque 0.75–1 hour As dictated by availability of labour, mechanical handling equipment and freight task.
Cold chain management	HACCP will be managed at receipt of goods. Refrigerated goods 'out of range' will be rejected. Probed temperatures will be marked on consignment notes. Refrigerated goods should be probed on unloading before removal from truck. Probes are to be the 'spear' type, digital. Infra red readings will not be accepted as accurate. Z Express can and will supply suitable probes if desirable. Cost of same to be charged to receiver. Air temperature readings will be recorded en route, and these records will be available for inspection on request. The linehaul truck will carry a probe to obtain a check temperature reading in the event of a non-conforming reading at unload. All non-conforming readings must be noted on the manifest.
Pallet thermo caps	Z Express will purchase/supply for the express purpose of ensuring optimum temperature retention in the event that a pallet requires removal from the trailer temporarily.

Attachment C Freight escalation clause

All costings shall be those applicable at the start of the contract date

Labour	42%	Based on RWU General Award-Grade 7- Driver multiple articulated vehicle weekly rate, plus on costs of 4 weeks annual leave plus 17.5% loading, payroll tax, SGC Superannuation and Workers Compensation gazetted rate for transport in WA.
Fuel	40%	Shell Oil Company Industrial price for diesel—inc GST at Shell Kewdale Truck Terminal
Tyres	6%	Michelin 11R22.5 LRH XDY—Inc GST
Repairs	7%	ABS catalogue covering CPI Groups, Perth-Transportation
Administration	5%	Based on Clerks (Road Transport Industry) Award-Grade 3-weekly rate plus on costs of 4 weeks annual leave plus 17.5% loading, payroll tax, SGC Superannuation and Workers Compensation gazetted rate for transport in WA.
	100%	

Price variation formula

$$R = \frac{(L1 \times \%)}{(L)} + \frac{(F1 \times \%)}{(F)} + \frac{(TI \times \%)}{(T)} + \frac{(R1 \times \%)}{(R)} + \frac{(A1 \times \%)}{(A)} \quad \text{Factor Increase}$$

Where
- R = Revised Rate
- L1 = Current Rate
- L = Labour rate at start
- F1 = Current fuel price
- F = Fuel price at start
- T1 = Current Tyre price
- T = Tyre price at start
- R1 = Current parts transport index
- R = Index at start
- A1 = Current Clerks labour rate
- A = Clerks labour rate at start

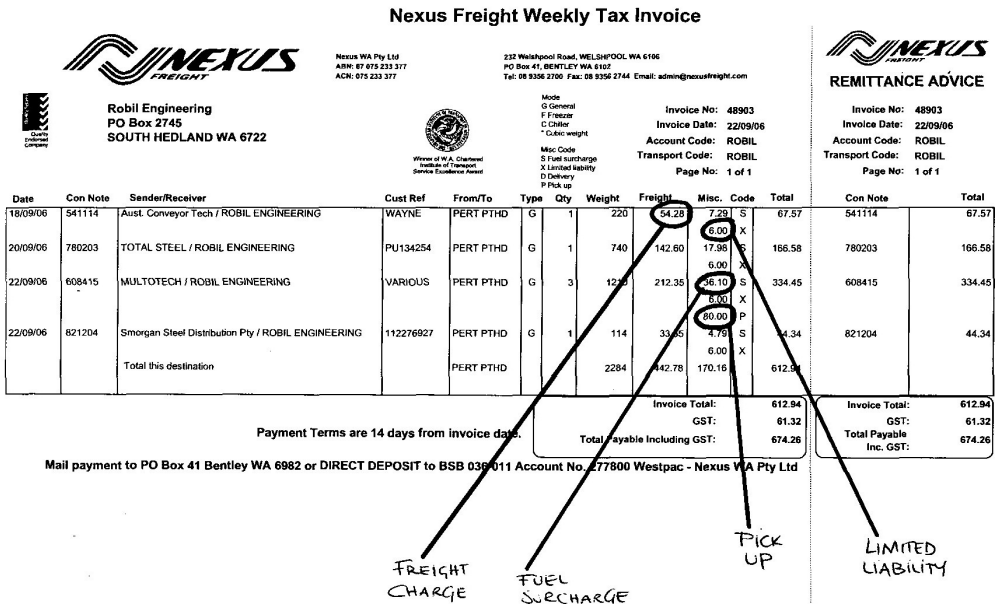
Appendix 7 Performance measurement checklist

When evaluating the performance of the freight carrier it is useful at the same time to evaluate the supplier and store performance in meeting its responsibilities for supply chain effectiveness. Table 7 and Figure 7 show areas of key responsibility and can be used as a checklist.

Table 7 Performance measurement checklist

Performance measures	Supplier	Transport company	Store
Enough healthy food ordered			X
Order placed on time			X
Perishable product temperature and handling instructions communicated with the order	X	X	X
Product supplied as ordered	X		
Product properly packed for journey	X		X
Ready for pick-up/delivered to depot on time	X		
Picked up on time		X	
Products separated/protected to prevent cross-contamination	X	X	X
Transport leaves on time		X	
Transport arrives on time		X	
Schedule changes pre-notified to satisfaction of chain partners	X	X	X
Inbound services to transfer depot meet schedule for truck transfer		X	
Truck loaded in drop order		X	
Carry over freight pre-agreed with store		X	X
Customer advised of short shipments pre-delivery			
Priority given to food deliveries			
Adequate size equipment to handle freight volumes provided		X	X
Store ready to receive on time (labour and equipment)			X
Product delivered on time		X	
Product delivered in full		X	
Product undamaged upon delivery	X	X	X
Thermo pallet covers available and used appropriately		X	
Temperature checked: on presentation by supplier, in transport unit, at freight transfer point, on receipt by store, in store	X	X	X
Temperature monitored	X	X	X
Temperature data logger used, placed correctly, retrieved and analysed	X	X	X
Checks and data logging demonstrates temperature maintained	X	X	X
Equipment maintained satisfactorily	X	X	X
Clear invoices and accurate pricing		X	
Efficient lodgement and processing of claims		X	X
Gas bottles, whitegoods and building materials service provided		X	
Effective wet strategy		X	
Indigenous training and employment offered/provided		X	

Figure 7 Example invoice



Nexus Freight Weekly Tax Invoice

NEXUS FREIGHT

Nexus WA Pty Ltd
ABN: 67 075 233 377
ACN: 075 233 377

232 Welshpool Road, WELSHPOOL WA 6106
PO Box 41, BENTLEY WA 6102
Tel: 08 9356 2700 Fax: 08 9356 2744 Email: admin@nexusfreight.com

Robil Engineering
PO Box 2745
SOUTH HEDLAND WA 6722

Winner of W.A. Chartered Institute of Transport Service Excellence Award

Mode
G General
F Freezer
C Chiller
* Cubic weight

Misc Code
S Fuel surcharge
X Limited liability
D Delivery
P Pick up

Invoice No: 48903
Invoice Date: 22/09/06
Account Code: ROBIL
Transport Code: ROBIL
Page No: 1 of 1

Date	Con Note	Sender/Receiver	Cust Ref	From/To	Type	Qty	Weight	Freight	Misc.	Code	Total
18/09/06	541114	Aust. Conveyor Tech / ROBIL ENGINEERING	WAYNE	PERT PTHD	G	1	220	54.28	7.29	S	67.57
									6.00	X	
20/09/06	780203	TOTAL STEEL / ROBIL ENGINEERING	PU134254	PERT PTHD	G	1	740	142.60	17.98	S	166.58
									6.00	X	
22/09/06	608415	MULTOTECH / ROBIL ENGINEERING	VARIOUS	PERT PTHD	G	3	1210	212.35	96.10	S	334.45
									6.00	X	
									80.00	P	
22/09/06	821204	Smorgan Steel Distribution Pty / ROBIL ENGINEERING	112276927	PERT PTHD	G	1	114	33.05	4.79	S	44.34
									6.00	X	
		Total this destination		PERT PTHD			2284	442.78	170.16		612.94

Invoice Total:	612.94
GST:	61.32
Total Payable Including GST:	674.26

Payment Terms are 14 days from invoice date.

Mail payment to PO Box 41 Bentley WA 6982 or DIRECT DEPOSIT to BSB 036-011 Account No. 277800 Westpac - Nexus WA Pty Ltd

REMITTANCE ADVICE

Invoice No: 48903
Invoice Date: 22/09/06
Account Code: ROBIL
Transport Code: ROBIL
Page No: 1 of 1

Con Note	Total
541114	67.57
780203	166.58
608415	334.45
821204	44.34
Invoice Total:	612.94
GST:	61.32
Total Payable Inc. GST:	674.26

FREIGHT CHARGE

FUEL SURCHARGE

PICK UP

LIMITED LIABILITY

Appendix 8 Choice of suitable vehicles and refrigeration equipment

It is vital that you do not take short cuts that will compromise temperature guidelines.

Table 8 Truck selection based on required transport temperature of products and journey time

	Maximum travel time for product		
Truck selection	+10°C to +12°C	0°C to +2°C	<-18°C
Open tray top			
Double-tarped load	1 hour	Not recommended	Not recommended
Curtainsider			
Unrefrigerated	3 hours	Not recommended	Not recommended
Refrigerated*	6 hours	3 hours	Not recommended
Insulated van			
Unrefrigerated	3 hours	1 hour	Not recommended
Refrigerated	Unlimited	Unlimited	Unlimited
Pre-cooled reefer			
No power	3 hours	1 hour	Not recommended
With power/generator	Unlimited	Unlimited	Unlimited

Source: *Transport and Handling of Perishable Products in Remote Areas of South Australia*.
* Most manufacturers of curtainsider trailers will only guarantee temperature control to +15°C less than ambient.

Appendix 9 Perishable product handling instructions

Handling instructions and temperature guidelines need to be pre-established by the store with the supplier and transport operator and communicated with the order as standard practice.

Table 9 Recommended storage and transit temperatures for frozen dairy, meat, poultry and seafood products

Product	Temperature (°C)	Avoid storing near	Comments
Dairy			
Butter	Between -28°C and -20°C	Seafood or strongly scented products	Readily absorbs odours
Cheese	Between -28°C and -20°C	Seafood or strongly scented products	Readily absorbs odours. Some cheese varieties (especially soft cheeses) may be susceptible to textural changes if frozen
Ice-cream	Between -30°C and -22°C	Seafood or strongly scented products	Readily absorbs odours. Textural changes may occur if stored >-22°C
Fresh meat			
Meat products	-23°C	Seafood or strongly scented products	To prevent micro-organism development store <-18°C. Readily absorbs odours
Poultry and eggs			
Poultry	-15°C	Seafood or strongly scented products	Readily absorbs odours
Seafood			
Abalone, cockles, crab, fin fish, lobsters, marron, octopus, oysters, prawns, scallops, shark, squid, tuna (except sashimi), yabbies	<-18°C	Any products that readily absorb odours	Expel odours (if not properly packaged)

Source: *Transport and Handling of Perishable Products in Remote Areas of South Australia.*

Table 10 Recommended storage and transit temperatures for chilled dairy, meat, poultry and seafood products

Product	Temperature (°C)	Avoid storing near	Comments
Dairy			
Milk	Between 0°C and 4°C	Seafood, cabbage, onions, all strongly scented products	Dairy products readily absorb odours. Cheese is susceptible to heat stress at temperatures >20°C
Yoghurt	<4°C		
Cream	Between 0°C and 4°C		
Butter	Between -1°C and 4°C		
Margarine	2°C		
Cheese	Between 1°C and 4°C		
Powdered/UHT/condensed milk	<25°C		
Fresh meat			
Meat carcase, side, quarter or bone-in	Between 0°C and 7°C	Seafood, cabbage, onions, citrus and other strongly scented products	Fresh meat products readily absorb odours
Meat portions, bones, carton meat	Between 0°C and 4°C		
Rabbit	<5°C		
Game	<7°C		
Edible offal	<7°C (small portions <5°C)		
Vacuum-packed goods	<7°C (small portions <5°C)		
Processed meat			
Uncooked (sausages, rissoles, etc)	<5°C	Seafood, cabbage, onions, citrus and other strongly scented products	Processed meat products readily absorb odours
Cooked (ham, luncheon meats, etc)	<5°C		
Fermented uncooked (salami, mettwurst, etc)	<5°C		
Poultry and eggs			
Poultry	<5°C	Seafood, cabbage, onions, citrus and other strongly scented products	Poultry and eggs readily absorb odours. Eggs may crack if placed in freezing temperatures
Eggs	<5°C		
Seafood*			
Green or cooked	Between 0°C and 4°C	Products that radily absorb odours	Seafood goods expel odours

Source: *Transport and Handling of Perishable Products in Remote Areas of South Australia*.
*Note: refer to 'Seafood Handling Guidelines' (SAFC/SARDI wall chart) for live seafood shipment requirements.

Table 11 Compatible products for long-distance transport

Product	Recommended storage and transport temperatures			
	0–2°C	4–7°C	7–10°C	13–18°C
Dry vegetables	Onion[1] Garlic			Ginger Pumpkin
Fruit/vegetables (ethylene sensitive)	Asparagus Bok choy Broccolini Broccoli Brussels sprouts Cabbage Carrot[1] Cauliflower Celery[1,3,9] Chard Chicory Chinese cabbage Collards Cut vegetables Endive Green onion Herbs (not basil) Kailon Kale Leek Lettuce Mint Mushroom[7] Mustard greens Parsley Parsnip Snow pea Spinach Sweet pea Turnip greens Watercress	Beans, snap, etc[10] Cactus leaves Cucumber Chilli Potato[1] Southern peas Tomatillo	Basil Eggplant[5] Long bean Okra Squash Watermelon	Tomato, mature green
Fruit/vegetables (not ethylene sensitive)	Artichoke Bean sprouts Beet Celeriac Horseradish Jerusalem artichoke Kohlrabi Radish Rhubarb[7] Shallot Sweet corn[7] Turnip Waterchestnut		Capsicum (bell pepper)	Cassava Sweet potato (boniato) Taro (malanga) Yam
Fruit (very low ethylene producing)	Bitter melon Blackberry Blueberry Cherry Coconut Currant Date Gooseberry Grape[6,7,8] Longan Loquat Lychee Orange[4,9] Raspberry Strawberry	Blood orange[4,9] Prickly pear Jujube Kumquat Mandarin[4,9] Olive Orange[4,9] Persimmon Pomegranate Tamarind Tangarine[4,9]	Carambola Cranberry Grapefruit Lemon[4,9] Lime[4,9] Pineapple[2,10] Tamarillo Tangelo[4,9] Ugli fruit	Breadfruit Grapefruit[4,9]
Fruit (ethylene producing)	Apple[9] Apricot Avocado, ripe[10] Rockmelon Cut fruits Fig[1,7,8] Kiwifruit Nectarine Peach Nashi Pear Pear European[9] Plum Prune Quince	Durian Feijoa Guava Honeydew melon	Avocado, unripe[10] Crenshaw melon Custard apple Passionfruit	Banana Jackfruit Mango Tomato, ripe Mangosteen Papaya Plantain Rambutan

Products in the same column can safely be mixed, but ethylene-sensitive vegetables should not be mixed with ethylene-producing fruits and dry vegetables should not be mixed with other fruits and vegetables. Products listed at temperatures more than 4°C are sensitive to chilling at lower temperatures. All prodcts are sensitive to freezing.

1. Absorbs odours from apples and pears
2. Absorbs avocado odours
3. Absorbs odours from onions, apples and carrots
4. Odour absorbed from strongly scented fruit and vegetables
5. Absorbs ginger odour
6. Damage to products due to the sulfur dioxide pads used with table grapes
7. Absorbs green onion odour
8. Absorbs leek odour
9. Absorbs onion odour
10. Absorbs capsicum (bell pepper) odour

Temperature product handling pocket guides and wall charts are available from: www.coldchaincentre.com.au/cold-chain-product.php. See Appendix 11 for examples.

Appendix 10 Freight quality management

Mapping your supply chain in terms of activity, temperature and time can be extremely useful. You need to do it with your supply chain partners to ensure accurate information is used. It will also help you identify where cold chain breaks occur, and for how long, and that enables you to take appropriate steps to see that the time your product is exposed to ambient temperature does not affect product quality. Add or modify components to meet your needs and develop a procedures manual based on the following table.

Table 12 Simplified map of a supply chain

Process/location	Temperature	Time
Product picked	Ambient	Early morning
Product to packing shed	Ambient	3 hours
Product graded, washed, waxed, chilled and packed	Cooled to 5°C +/- 2°C	48 hours
Product ready for pick-up	Temperature checked 5°C +/- 2°C	As per schedule e.g. 9.00 am
Transport arrives for pick-up Product loaded	Truck and product temperature checked and recorded before loading. Reject if out of agreed spec (product 5°C +/- 2°C, truck/container pre-cooled to ambient if not in temperature-controlled loading dock, otherwise 5°C +/- 2°C)	15 minutes 30 minutes
Truck travels to depot	Temperature 5°C +/- 2°C	30 minutes
Product unloaded and transferred to linehaul truck	Maintain product temperature 5°C +/- 2°C Thermo pallet cover used while product in ambient temperature at depot	1 hour
Linehaul truck	Truck and product temperature checked and recorded before loading. Reject if out of agreed spec (product 5°C +/- 2°C, truck/container pre-cooled to ambient if not in temperature-controlled loading dock, otherwise 5°C +/- 2°C)	15 minutes
Truck travels to first drop	Temperature 5°C +/- 2°C	8 hours
Truck unloads	Forklift used to cut unloading time	30 minutes
Truck travels to destination store	Temperature 5°C +/- 2°C	2 hours
Truck arrives at store on time, store ready to unload	Truck, product temperature and receival cool room checked and recorded before unloading. Reject if out of agreed spec (product 5° C +/- 2°C, truck/container pre-cooled to ambient if not in temperature-controlled loading dock, otherwise 5°C +/- 2°C)	20 minutes
Product unloaded and placed in cool room	Ambient then 5°C +/- 2°C in cool room	30 minutes

Appendix 11 Cold chain wall charts

[Note these are copyright and can be bought from the South Australian Freight Council: www.coldchaincentre.com.au/cold-chain-product.php.]

MEAT & DAIRY HANDLING GUIDELINES

Chilled Unprocessed Meat

Carcase, side, quarter or bone-in, major separated cut (wrapped or unwrapped)

Initial	Reduce to 7°C (surface temperature) within 24 hr of stunning
Storage & Transport	Not > 7°C (surface temperature)
Loading Ship	Not > 3°C and not < - 1.5°C
Loading Aircraft	Not > 4°C and not < - 1.5°C

Other meat eg boned goods, meat portions, carton meat

Initial	Not > 5°C within 24 hr of stunning
Storage & Transport	Not > 4°C
Loading Ship	Not > 3°C and not < - 1.5°C
Loading Aircraft	Not > 4°C and not < - 1.5°C

Poultry

Initial	Fresh Sale: surface temperature not > 7°C within 6 hr, not > 5°C within 12 hr of slaughter. Processing: surface temp not > 7°C and then 5°C within 3 hr of processing
Storage & Transport	Not > 5°C
Loading Ship	Not > 1°C
Loading Aircraft	Not > 3°C

Rabbit

Initial	5°C within 2 hr of completion of slaughter
Storage & Transport	Not > 5°C
Loading Ship	Not > 1°C
Loading Aircraft	Not > 3°C

Game

Initial	7°C within 24 hr of slaughter and then, at or < 7°C (lesser portions not > 5°C)
Storage & Transport	Not > 7°C (lesser portions not > 5°C)
Loading Ship	Not > 3°C
Loading Aircraft	Not > 4°C

Vacuum Packed Goods

Initial	Not > 7°C (surface temperature) and not > 5°C for lesser portions and then as close as possible to 0°C. If Ageing, Not > 4°C
Storage & Transport	Not > 7°C (surface temperature) and not > 5°C for lesser portions. Store as close as possible to 0°C
Loading Ship	Not > 3°C
Loading Aircraft	Not > 4°C

Edible Offal

Initial	Not > 5°C (for giblets, within 1 hr of evisceration). Vacuum Packed: < 5°C and as close as possible to 0°C
Storage & Transport	Not > 7°C (surface temperature) and not > 5°C for lesser portions
Loading Ship	Not > 0°C and not < - 1.5°C
Loading Aircraft	Not > 3°C and not < - 1.5°C

Dairy Products

Cheese

Chilled	Not < 0°C and not > 4°C
Frozen	Between -28°C and -20°C

Check label as temperature required may vary with cheese variety. Not all cheeses especially soft cheeses, can be frozen.

Ice-Cream

Frozen	Between - 30°C and -22°C

Ice-cream and ice-cream products are extremely sensitive to temperature fluctuations which may result in permanent damage to texture, known as "heat shock". At no time should ice-cream products be warmer than -18°C or stored next to warmer products.

Milk

Chilled	Fresh	Not < 0°C and not > 4°C
Ambient	Powdered/Dried*	Not > 25°C
Ambient	UHT	Not > 25°C
Ambient	Condensed	Not > 25°C

Butter

Chilled	Not < - 1°C and not > 4°C
Frozen	Between -28°C and -20°C

Yogurt

Chilled	Not > 4°C

Cream

Chilled	Not < 0°C and not > 4°C

Whey Powder*, Casein*

Ambient	Not > 25°C

* Humidity should be low for dried products so that consistency isn't altered chemically or physically ie. hardening of contents.

For Frozen products, every part of the food is cooled to not > - 18°C.

Always check product label and/or accompanying paperwork for required product storage temperature as variations may occur.

Goods must be protected from other elements such as, pests, vermin, dust and contamination, condensation, or package damage.

Frozen Meat

All Frozen meat (except poultry)	-10°C or below
Poultry	-15°C or below

Chilled Processed Meat

Fermented or Slow Cured (uncooked)
eg. Salami, Mettwurst, Bacon, Corned Beef, Prosciutto, Pancetta, Speck, Parma Ham etc

Initial	Fermented Meat: stored at or < 5°C until fermentation. ANZFA Food Standards code 1.6.2, no.8 should be followed for the fermentation process Cured Meat: kept at < 5°C until penetration of brine/curing solution
Fermenteted	Keep product dry and cool
Cured	Store at not > 5°C

Processed and Whole Muscle Products (cooked)
Ham, Corned Beef, Roast Beef, Pastrami, Luncheon Meat, Cooked Sausages, liverwurst etc

Initial	Raw meat at not > 5°C. After cooking (at 65°C or equivalent), for cured products: cool to 50°C within 3.25 hr, 12°C within a further 7.5 hr, 5°C within a further 1.75 hr. For uncured products: cool to 50°C within 2.5 hr, 12°C within a further 6 hr, 5°C within a further 1.5 hr
Storage & Transport	Not > 5°C
Loading Ship	Not > 1°C
Loading Aircraft	Not > 3°C

Processed (uncooked)
Sausages, Rissoles, Seasoned & Crumbed, Rolled Roasts, Corned meat etc

Initial	5°C or less
Storage & Transport	Not > 5°C
Loading Ship	Not > 1°C
Loading Aircraft	Not > 3°C

Pate and Terrines

Initial	< 5°C and as close as possible to 0°C
Storage & Transport	< 5°C and as close as possible to 0°C
Loading Ship	Not > 1°C
Loading Aircraft	Not > 3°C

Dried Meat Products
eg, Jerky, biltong and freeze dried etc

Initial	Initial raw meat not > 5°C Water activity reading not >0.85
Storage & Transport	Keep product dry and cool
Loading Ship	Keep product dry and cool
Loading Aircraft	Keep product dry and cool

Important Information

NB All temperatures are at the site of microbiological concern and/or thermal centre, unless stated otherwise.

Stated temperatures are to be followed unless the establishment can achieve an alternate time and temperature that is specified in the approved arrangement and does not adversely affect the microbiological safety of the meat.

"<" equals less than, and ">" equals greater than

Unprocessed Meat

All carcase and carcase parts are to be placed in chiller or freezer within 2 hours of stunning.

Processed Meat

Maintain a temperature controlled environment of not > 10°C during processing.

General Information Regarding Meat

Different temperature regulations may be required when exporting to different countries.

The handling of meat in Australia is controlled by government laws and regulations.

All handlers, packers and transporters shall follow Australian Standards for Meat Processing, the Food Standard Code and relevant State Territory Acts and Regulations in regards to temperature, time, hygiene practices, prevention of cross-contamination, correct labelling identification and packaging, appropriate paperwork and correct transporting and storage procedures.

This handling guide is based on these Regulations and Standards but cannot incorporate all the minor handling variations covered by these laws or individually approved HACCP (Hazard Analysis Critical Control Point) plans. If in doubt or when making critical decisions, always consult the relevant Regulation or Standard to ensure compliance.

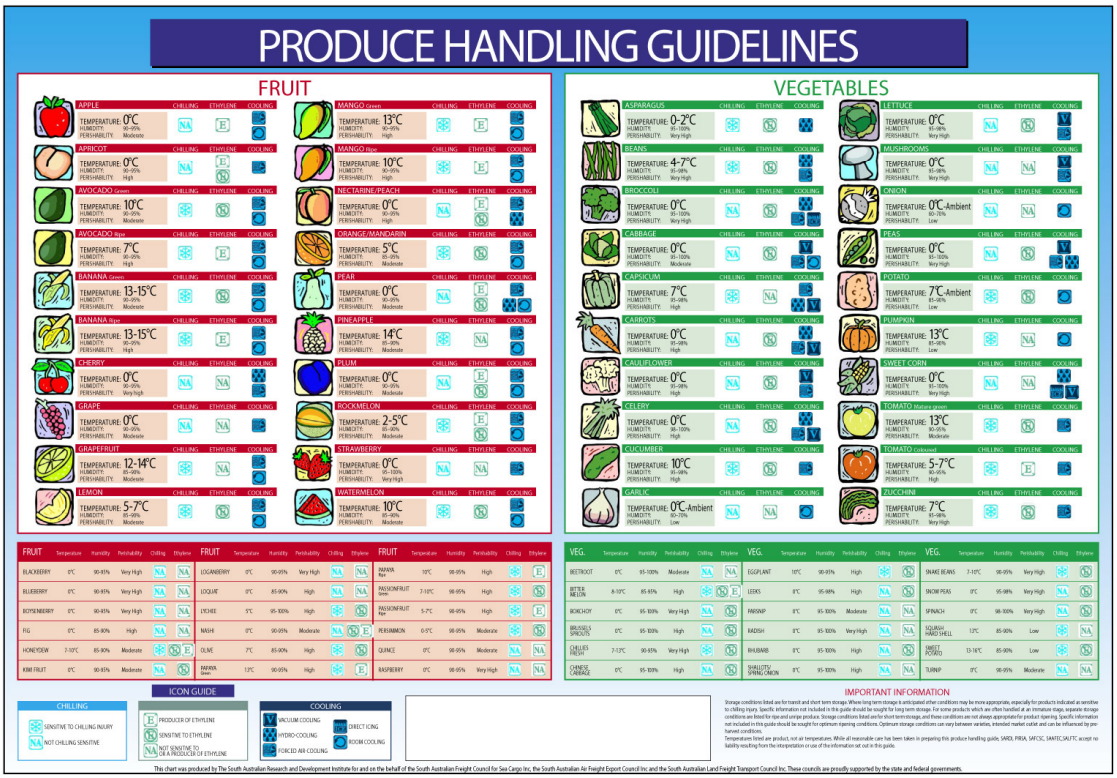
Further Information

While all reasonable care has been taken in preparing this guide SARDI, PIRSA, SAFCSC, SAAFEC, SALFTC accept no liability resulting from the interpretation or use of the information set out in this guide.

For further information contact the relevant freight council.

The SAAFEC, SAAFEC and SALFC are proudly sponsored by the state and federal governments.

Further copies of this guide are available from the Roseworthy Information Centre. Phone 1800 356 446, Fax (08) 8303 7629 or e-mail farmer.info@saugov.sa.gov.au


PRODUCE HANDLING GUIDELINES
FRUIT
VEGETABLES
ICON GUIDE
IMPORTANT INFORMATION

Abbreviations

ALPA	Arnhem Land Progress Association
APY	Anangu Pitjantjatjara Yankunytjatjara
DTEI	Department of Transport, Energy and Infrastructure (SA)
HACCP	Hazard Analysis and Critical Control Point
NATS	Ngaanyatjarra Agencies and Transport Services
NRHA	National Rural Health Alliance
RIST	Remote Indigenous Stores and Takeaways project
SAFC	South Australian Freight Council
SARDI	South Australian Research and Development Institute