

Flinders Island Fuel Supply Study – Summary Report

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Approvals

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Glossary of Terms / Abbreviations

AIP	Australian Institute of Petroleum
BP	BP Australia
CAPEX	Capital Expenditure
Centrel	Centrel Pty Ltd (a BP Group company)
COD	Cash On Delivery
Council	Flinders Council
EBIT	Earnings before Interest & Taxes
Furneaux	Furneaux Freight Pty Ltd
GST	Goods and Services Tax
Island	Flinders Island
ISO Containers	ISO Tank Shipping Containers
Hydro	Hydro Tasmania
King	King Island
L	Litre
\$ / L, c/L	\$ /Litre or cents/Litre
LSD	Low Sulphur Diesel
O&M	Operating and Maintenance costs
m	metre
p/a	Per annum
PULP	Premium Unleaded Petrol
Resonance	Resonance Consulting
Tasports	Tasmania Port Corporation Pty Ltd
TGP	Terminal gate price, the wholesale price for bulk purchase at the terminal
Sea Road Logistics	A division of Sea Road Holdings Pty Ltd
Study	Fuel Supply Study
ULP	Unleaded Petrol

1. Introduction

1.1 Purpose

Flinders Council (Council) has engaged Resonance Consulting (Resonance) to prepare a high level Fuel Supply Study (Study) to assess the current fuel supply chain to the Island and investigation options for the provision of a more economical, reliable, safe and efficient fuel supply.

The project has been conducted in consultation with Tasports who have provided site and personnel access, financial data and concept design/costs associated with identified options.

1.2 Scope & Methodology

1.2.1 Agreed Scope

Resonance has undertaken the following agreed activities in developing this Study:

- a) Develop decision criteria/considerations for assessing current situation and options: financial (cost) and non- financial (safety, environment, security of supply etc.);
- b) Build a process map (supply chain model) and cost model for the current supply chain, including a visit to site;
- c) Identify other options for supply;
- d) Identify opportunities to optimise the existing supply chain;
- e) Assess current situation and options against criteria; and
- f) Develop a Study report & recommend next steps.

This report is not a forensic audit of the Flinders Island fuel supply chain. It is a high level study to assist stakeholders in understanding key drivers for fuel costs on the Island.

1.2.2 Methodology

A multi criteria analysis and net present value (NPV) analysis for each option was developed in consultation with stakeholders- See section 3.

The NPV analysis is not a comprehensive analysis of the respective option cash flows, rather a simple methodology to differentiate options.

1.2.3 Basis for Study

As Low Sulphur Diesel (LSD) fuel accounts for 75% of all fuels imported to the Island, this Study has focused on diesel supply, noting that both Unleaded Petrol (ULP) and Premium Unleaded Petrol (PULP) have the same supply chain.

In completing this study the following representations have been made:

- Tasmanian Ports Corporation Pty Ltd (Tasports);
- Flinders Council (Council); and
- Site visit to Flinders Island week commencing 6 May 2013.

Tasports have provided management reporting information as at 30 April 2014 (refer Appendix 4) for Wholesale component and other data for the Study in relation to supply, transport and retail cost components of the Islands fuel supply. It is outside the scope of this Study to attest to the validity, completeness and accuracy of this data, however the data and quantum of cost supplied appears to reflect the costs and margins of the supply.

Assumptions made are included at Appendix 4.

1.3 Stakeholders

The following stakeholders have an interest in the outcome of the study.

1.3.1 Flinders Council & Community

Flinders Council is the local municipality delivering a wide range of legislated and non-legislated services and initiatives to the Island community. Council must also ensure that the standard of services provided are financially and operationally sustainable over both the short and long-terms, and are appropriate to the needs and desires of the community it serves.

Flinders Council includes the communities within the Furneaux Group and the islands of eastern Bass Strait up to the Victorian border, including the Hogans Group and the Deal Island Group.

Flinders Council is a relatively large consumer of fuels on the Island, but is not party to the commercial arrangements in the fuel supply chain, other than as a customer and user.

<http://www.flinders.tas.gov.au/about-council>

1.3.2 Tasmanian Ports Corporation Pty Ltd (Tasports)

The Tasmanian Ports Corporation Pty Ltd (Tasports) is a registered, private company fully owned by the Tasmanian Government. Tasports is responsible for the operations and management of all ports in Tasmania. The company was created following the amalgamation of the state's four port companies – Hobart Ports Corporation Pty Ltd, Port of Launceston Pty Ltd, Port of Devonport Corporation Pty Ltd and Burnie Port Corporation Pty Ltd – on 1 January 2006.

Tasports' purpose is to facilitate trade for the benefit of Tasmania, through the commercial provision of infrastructure and services.

Tasports is the entity that sources and distributes bulk fuel to Flinders and King Islands.

<http://www.Tasports.com.au/about/index.html>

1.3.3 Furneaux Freight Pty Ltd (Furneaux)

Furneaux Freight Pty Ltd (Furneaux) operates a shipping service to Lady Barron on the Island, sailing on the tide. A weekly service between Bridport, Tasmania and Lady Barron is provided for general cargo and an on demand service for livestock and all other cargo.

The cargo vessels are capable of carrying an average of 300 tonnes of freight. Along with general cargo, the vessels are also set up to transport large or small amounts of livestock.

The service arrives at Lady Barron approximately 8 hours after departing from Bridport, and departs Lady Barron approximately 9 hours after arrival, arriving at Bridport on the high tide.

<http://furneauxfreight.com.au/>

Furneaux commercial rates for freight can be viewed at:

<http://furneauxfreight.com.au/rates/>

1.3.4 Sea Road Holdings Pty Ltd (Sea Road)

Sea Road Holdings Pty Ltd is a privately owned Australian integrated transport and logistics service provider specialising in Bass Strait shipping and logistics.

Sea Road Logistics, a division of Sea Road Holdings Pty Ltd provides an end-to-end freight logistics service to and from Tasmania. Sea Road Logistics and Tasports have a commercial arrangement for the transport of fuel from Burnie to Bridport for the Island.

<http://www.searoadholdings.com.au/>

1.3.5 Hydro Tasmania: Whitemark Power Station

Hydro Tasmania (Hydro) is an Australian renewable energy business, is state government owned and currently has assets in excess of \$5 billion. Hydro generates hydropower and wind power in Tasmania and trade electricity and energy-related environmental products (such as Renewable Energy Certificates) in the Australian energy market.

Hydro owns and operates the Flinders Island power station, Whitemark Power Station (Power Station) which contains four (4) diesel generator sets providing an installed capacity of 2.77 megawatts (MW).

Tasports has a three (3) year agreement expiring 30 June 2017 to supply diesel with Hydro.

<http://www.hydro.com.au/about-us>

1.4 Background

1.4.1 Australian Fuel Supply

The price of fuel (diesel) in Australia is nearly always dependent on international market prices, not production costs. As per the Australian Institute of Petroleum website (www.aip.com.au) diesel prices in regional markets reflect the supply and demand balance in each market and are determined by market forces, not by the cost to produce it.

The key diesel pricing benchmark for Australia is the Singapore price of diesel (Gasoil 10ppm sulphur). The Singapore benchmark price of diesel plus shipping costs and Australian taxes represents almost the entire wholesale price of diesel – typically around 95% of Terminal Gate Prices (TGPs). The remaining 5% of TGPs reflect insurance, local wharfage and terminal costs and a small wholesale marketing margin (where competitively possible).

TGPs are typically around 95% of the diesel pump price. Apart from TGP, pump prices in Australia also reflect land transport costs, marketing and administration costs, and the costs of running service stations like wages, rent and utilities. The ability to cover these costs depends on local area competition.

The Australian wholesale prices for diesel (including spot Terminal Gate Prices or TGPs) are closely linked to the Singapore price of diesel – not crude oil prices.

Facts about fuel pricing in Australia (www.aip.com.au) is included at Appendix 1.

Business fuel users are able to claim a fuel rebate through the tax system via business activity statement (BAS) returns. Fuel tax credit rates vary depending on the fuel used and the activity the user uses it in. An abridged summary is included at Appendix 2.

1.4.2 Island Background - Fuel Supply

Tasports sources fuel for Flinders Island (Island) from Centrel Pty Ltd (a BP Group company) based in Burnie, Tasmania.

Tasports acquired the Lady Barron bulk fuel facility on the Island from BP on 1 June 1994 and secured a long term fuel supply arrangement with Hydro Tasmania (Hydro) to supply low sulphur diesel fuel (LSD) to the power station. Fuel supplies to the Island are currently around 2,500,000 Litres (L) per annum. The composition of fuel supply is shown in Figure 1 below.

Fuel supply is dominated by diesel fuel (LSD) which accounts for around 72% of total fuels imported to the Island. The bulk of this LSD (40%) is used for power generation at the Whitemark Power Station (Power Station) followed by consumption by other commercial (such as primary production) and domestic uses (approximately 893,000L). The remaining fuel types are Unleaded Petrol (ULP) and Premium Unleaded Petrol (PULP) which is used predominately for passenger vehicles on the Island.

Fuel consumption on the Island has declined from 2,629,000 L in 2009. The primary driver of fuel consumption appears to be power generation (driven by power demand which is typically driven by population changes).

Tasports ceased supplying aviation fuels (AVGas and JetA1 fuels) in June 2007.

Table 1: Island Fuel Consumption by Sector

Sector L'000	2009/10		2010/11		2011/12		2012/13		2013/14	
	Actual	%age of Total	Actual	%age of Total	Actual	%age of Total	Actual	%age of Total	Forecast	%age of Total
Power Generation	1,156	44%	1,020	43%	1,082	42%	938	39%	905	36%
Commercial	761	29%	709	30%	752	29%	765	32%	835	34%
Retail	712	27%	630	27%	721	28%	707	29%	752	30%
Total	2,629	100%	2,359	100%	2,556	100%	2,410	100%	2,492	100%

Notes

- 1: Source Tasports– Refer Appendix 4
- 2: 2013/14 figures have been annualised / extrapolated from 30 April 2014 Tasports data

Figure 1: 2013/14 Island Fuel Supply Composition

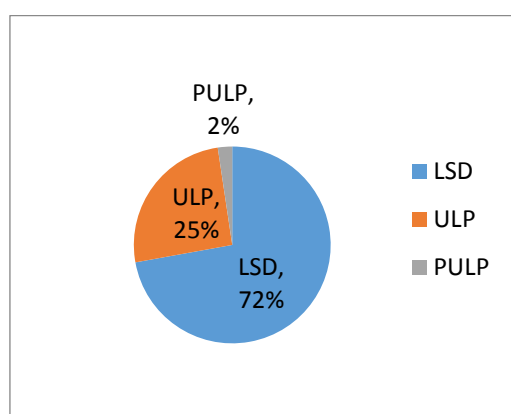
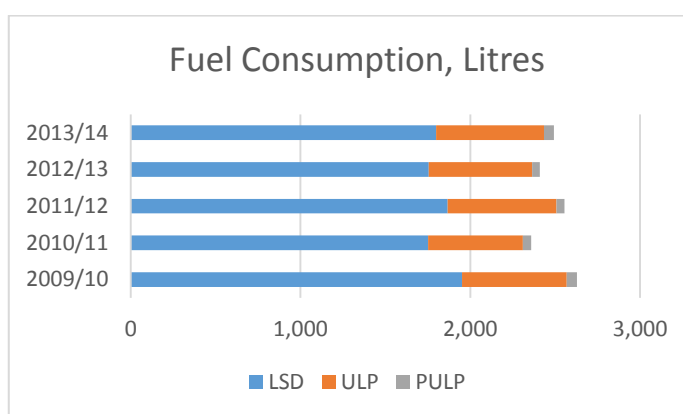


Figure 2: Island Fuel Consumption – Last 5 Years



Source Tasports - Refer Appendix 4

Table 2: Island Fuel Consumption- Last 5 Years

L '000	LSD			ULP	PULP	Total	%age of Total				
	Power Station (PS)	Other	Total				LSD - PS	LSD - Other	ULP	PULP	Total
2009/10	1,156	796	1,952	616	61	2,629	44%	30%	23%	2%	100%
2010/11	1,020	731	1,751	558	50	2,359	43%	31%	24%	2%	100%
2011/12	1,082	784	1,866	642	48	2,556	42%	31%	25%	2%	100%
2012/13	938	818	1,756	608	46	2,410	39%	34%	25%	2%	100%
2013/14 ²	905	893	1,799	635	59	2,492	36%	36%	25%	2%	100%
5 Yr. Ave	1,020	805	1,825	612	53	2,489	41%	32%	25%	2%	100%

Notes:

- 1: Source Tasports – Refer Appendix 4
- 2: 2013/14 figures have been annualised / extrapolated from 30 April 2014 Tasports data

1.4.3 Island Fuel Supply Affordability

Fuel price affordability is not a new issue for the community and in the past a number of residents and business operators, primary producers in particular, have raised concerns over fuel pricing.

Council is also aware that a number of primary producers have imported fuel to the island using their own supply chain at a price cheaper than the Tasports price. Evidence to support this quantum of discount is difficult to mount.

Retail or pump fuel price affordability on Flinders Island and King Island appears comparable (3 cents per litre), noting that fuel supply to both Island is consistently more expensive when compared to mainland Tasmania and mainland Australia. At the date of this Study, the pump prices (retail) prices per litre were approximately 40 cents per litre (c/L) greater than the pump price in regional Tasmania (as per AIP).

Table 3: Pump Price comparison

Pump Price cents/ L inc GST	Hobart www.aip.com.au	Flinders Island Whitemark IGA service station	King Island King Island Motors	FI Difference to Tasmania mainland prices
LSD	168.2	206.0	203.0	37.8
ULP	156.2	203.5	201.0	47.3
PULP	Na	207.3	214.0	Na

Note

- 1: Average Regional Tasmanian Pump price, week ending 11 May 2014, <http://www.aip.com.au/pricing/retail/diesel/index.htm>
- 2: Retail pump price 7 May 2014, Walker's Supermarket, Flinders Island
- 3: Retail pump price 16 May 2014, King Island Motors, King Island
- 4: All values are in cents per litre and are inclusive of GST
5. Refer Appendix 4 for data source.

1.4.4 Wholesale (Tasports) Price to Users (Effective 5 May 2014)

The price of fuel that Tasports charges to customers effective the week beginning 1 May 2014 is summarised in the table below.

Table 4: Wholesale (Tasports) Price to Users (Effective 5 May 2014)

	LSD		ULP		PULP	
	Ex GST	Inc GST	Ex GST	Inc GST	Ex GST	Inc GST
Hydro	167.1	183.8				
Service Stations ²	170.4	187.4	169.5	186.5	178.1	195.9
Retail (other Primary Producers) ²	172.4	189.7	171.6	188.77	180.2	198.18
Average	170.1	187.1	170.2	187.3	178.8	196.7

Note

- 1: Source- Tasports fax dated 1 May 2014 – Refer Appendix 4
- 2: Customers receive two (2) cents per litre discount if payment is made Cash On Delivery (COD)

1.4.5 Retail Price to Users (Effective 5 May 2014)

The retail or pump price of fuel to the domestic population effective 7 May 2014 is summarised in the table below.

Table 5: Retail Pump Price to Users (Effective 5 May 2014)

	LSD		ULP		PULP	
	Ex GST	Inc GST	Ex GST	Inc GST	Ex GST	Inc GST
Service Stations	187.3	206.0	185.0	203.5	188.6	207.5

Note

1: Source- Walker's Supermarket, Whitemark, 7 May 2014- Refer Appendix 4

2. Fuel Supply Chain

2.1 Fuel Supply Chain

Fuel (LSD, ULP, PULP) is sourced, supplied and distributed to the Island by the Tasmanian Ports Corporation (Tasports) through its facilities (Bulk Fuel Facility) located at Lady Barron (refer figure 5,6,7).

As diesel accounts for approximately 72% of all fuels imported to the Island, this Study has focused on diesel supply, noting that both ULP and PULP have the same supply chain. The supply chain of fuel is outlined below.

Table 6: Island Fuel Supply Chain

	Supply	Transportation	Storage	Distribution & Sales	Retail (Pump) Sales
Summary	Bulk Supply via TGP	Road & Sea Transport to Island	Storage at Lady Barron fuel tanks	Bulk and wholesale Distribution	Retail Sales
Party	Centrel Pty Ltd (BP) Tasports	Sea Road Logistics Furneaux Freight		Tasports	Commercial Entities
Description	Tasports commercial contract of fuel from BP Depot in Burnie	190 Km Road transport to Bridport from Burnie (Sea Road Logistics) 80 km sea ferry to Lady Barron from Bridport (Furneaux)	Storage of LSD, ULP, PULP at Lady Barron	Sales LSD, ULP, PULP to major customers	Sales LSD, ULP, PULP to retail (pump) customers
Notes -See below	1,9	2,3,5	4,5	6,10	7,8
% total pump price)	73.0%	9.0%		9.0%	9%
	LSD 206.0 (inc GST)				

Supply chain notes:

- Fuel is sourced by Tasports from Centrel Pty Ltd (a BP Group Company) in Burnie, Tasmania.

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2. Fuel is transported from Burnie in ISO Containers, approximately 190kms by road by truck to Bridport. ISO Containers carry 25,230 L, and are designed to International Standards. Tasports have commercial arrangement with Sea Road Logistics to freight the fuel to Bridport. Tasports lease 9 ISO Containers from SCF Group Pty Ltd and are kept at the Sea Road Logistics yard in Devonport and used interchangeably between King Island and Flinders Island.
3. The ISO Containers of fuel are then loaded to a commercial sea freighting company in Bridport (Furieux Freight Pty Ltd) who then transport the ISO containers to the Island under a commercial arrangement. The shipping journey to the Island takes approximately 8 hours to complete.
4. The ISO Containers are then unloaded by Tasports staff at Lady Barron and taken a short distance (550 metres) by truck to the Fuel Tank Farm for storage. The ISO Containers are pumped into the stationary storage tanks by Tasports staff.
5. Once the ISO containers are emptied, the ISO containers are returned by Tasports to the ferry for return to Bridport empty.
6. Tasports is responsible for the distribution of fuel to the end users or customers of the fuel. Tasports have advised the major customers are:
 - Hydro Tasmania;
 - Flinders Council;
 - Markarna Park; and
 - Primary producers and commercial enterprises.

Fuel is transported to customers at varying prices by Tasports by a 15,000 litres capacity tanker. Tasports advises that the tanker is near end of life (1992 build).

7. Two (2) commercial entities (Walker's Supermarkets and the Lady Barron Store) retail fuel to the Island and earn a retail margin of between 10 to 12 cents per Litre. Vigorous competition on the mainland "means that the profits made by fuel suppliers are typically a very small proportion of the retail price (e.g. average industry profit over the last decade is around 2 cents per litre of all fuels sold)".¹ Mainland supply is dominated by the large petrol retailers (Shell, Caltex, BP Australia) and the large Groceries retailers Coles and Woolworths.
8. Tasports own and maintain the fuel bowsers on the Island for both service stations their costs are minimal.
9. There are on average two (2) ISO Containers per week for fuel supply to the Island.
10. Tasports advise that a full time equivalent (FTE) of 1.2 employees provide labour to the supply chain. This includes ISO Container movements, fuel loading and unloading, distribution to customers on the island, and billing and administration functions.

¹ www.aip.com.au , Facts About Diesel Pricing at Appendix 2

2.2 Supply Chain Cost Model

The costs associated with the supply chain are based on summary cost data and information provided by Tasports. Resonance Consulting has not sighted actual invoices or costs or been provided any commercial or contractual arrangements.

The imputed cost of supply of LSD (excluding GST) to the Island is predominately the fuel commodity. The supply chain is summarised below:

- Fuel Supply/Commodity: 73%
- Transport (road & sea): 9%
- Wholesale (storage & distribution): 9%
- Retail: 9%

Based on 2013/14 forecast LSD volumes, this equates to the \$3,423,844 (ex GST) following costs:

- Fuel Supply Commodity: \$2,504,360
- Transport (road & sea): \$301,620
- Wholesale (storage & distribution): \$323,556
- Retail: \$294,308

The price of LSD to the Island in the week beginning 1 May 2014 was:

- Retail 187.3 (ex GST) 206.0 (inc GST)
- Wholesale 171.1 (ex GST) 188.2 (inc GST)
- Wholesale (Hydro) 167.1 (ex GST) 183.8 (inc GST)

Supply chain details are further outlined below.

Table 7: LSD Fuel Supply Cost

LSD Component	Party	cents per litre (ex GST)	cents per litre (Inc GST)	%age of Total
TasPorts TGP (approximate) ^{1,5}	Tasports	137.0	150.7	73%
Transportation ²	Road- Sea Road	4.8	5.3	9%
	Sea- Furneaux Freight	11.7	12.9	
Storage ³	Tasports	14.0	15.4	7%
Distribution ³	Tasports			
Other (assume gross margin) ⁴	Tasports	3.6	4.1	2%
Retail	Commercial Entity	16.2	17.7	9%
Total		187.3	206.0	100%

Note:

- 1: Average 2014 to date TGP per <http://www.aip.com.au/pricing/tgp.htm>.
- 2: Based on Furneaux Freight cost to Tasports of \$2,624.23 (ex GST) per ISO, Sea Road cost to Tasports of \$1,306.00 (ex GST) per ISO, and Tasports Wharfage cost of \$350.00 (ex GST).
- 3: Calculated from Tasports management reports dated 30 April 2014.
- 4: Balancing figure to balance to the retail pump price.
- 5: The supply agreement between Tasports and BP Australia expires on 1 June 2014. Purchase of the Bulk Fuel Facility from BP was paid for over 10 years with consideration included in the TGP price. The TGP price was reduced by two (2) cents per litre in February 2014 when the King Island Agreement ceased.

2.3 Study Observations

Key observations to note regarding the current supply chain are:

1. Security of supply for fuel is critical to the Island. Tasports have commercial obligations to maintain a minimum supply on the Island for power generation.
2. The Supply chain has many parties, such as Centrel Pty Ltd (BP), Sea Road Logistics, Furneaux Freight, Tasports, Retail (Supermarkets). Each party earns a margin for their supply, asset, service or material.
3. The supply chain is broadly cost reflective, with each party making a commercial return.
4. The supply chain is inefficient with multiple handling of the fuel to reach the end user; that is:
 - ISO Containers are filled in Burnie (Centrel Depot) and then road transported 190Kms to Bridport.
 - ISO Containers return empty on the return journey to the Sea Road Logistics yard in Devonport.
 - ISO Containers are transported by truck to the Bulk Fuel Facility (550 m) and pumped to the tanks each ISO movement.
 - It is understood that the Furneaux vessel has bulk fuel storage capability that is not being used.
5. Infrastructure on the Island, particularly Tasports' Bulk Fuel Facility at Lady Barron, and associated infrastructure (truck to distribute fuel around the island), is ageing and requires ongoing maintenance, certification (fuel tanks, pumps etc.) and potentially replacement (truck) which may add pressures to the wholesale component of fuel prices in the future.
6. There are opportunities to "squeeze" the supply chain to yield a lower pump price on the Island, but is complicated by the many parties involved and absence of competition.

7. There is an opportunity for Tasports to negotiate a new commercial arrangement with the current (Centrel Pty Ltd) or new suppliers, and possibly closer to Bridport, say Bell Bay (to negate road transport costs) that can reduce fuel prices landed on the Island.
8. The transfer price by Tasports to Hydro for Island power generation is approximately 3 to 4 c/L lower than to other users on the Island. In overall terms, this in effect is not significant (\$35,000 per annum²) and in a commercial context is appropriate given the volumes this user purchases.
9. The cost of freight to the Island for LSD amounts to approximately 9.0% or approximately \$ \$301,620 (ex GST).
10. The cost of fuel freight to the Island has been the subject of recent review in 2012 (GHD report to the Department of Infrastructure Energy, Resources, Tasmania; Furneaux Shipping Report).
11. Approximately 50% of the Island's diesel fuel supplies are for power generation at the Whitemark Power Station. Hydro requires the diesel fuel to be LSD which is a premium quality fuel. The diesel sourced for other Island users may be in excess or superior to user's needs. There is an opportunity to source a different quality diesel fuel at reduced cost that would benefit Island users.
12. The generation profile of the Whitemark Power Station significantly influences the profile of fuel supply to the Island and hence the supply chain. Should this alter or change into the future (i.e. reduced demand or addition of new renewable generation capacity through solar or wind projects) there is likely to be a significant impact on fuel supplies to the Island. Council and Tasports could engage Hydro regarding long term capacity and generation forecast.
13. Tasports sources significant volumes of fuel state wide (approximately 12 million litres per annum).. There is an opportunity for Tasports to formalise the strategic procurement of fuel for the benefit of Tasports which may yield a lower fuel cost to users on the Island.
14. Tasports could give consideration to publishing to Council its supply prices to give some transparency to wholesale and transportation cost, subject to confidentiality requirements.

² Transfer price - 4 c/L X 890,000L = \$35,700 (ex GST)
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3. Supply Chain Optimisation

Following the supply chain analysis, Tasports and Resonance Consulting met and reviewed the current supply chain to identify potential non capital options to reduce costs.

The outcomes of these discussions are presented in section 5 and summarised below:

Key actions include:

- Review and formalisation of the strategic procurement of fuel by Tasports;
- Negotiation of new commercial arrangement with the current or new suppliers, and possibly closer to Bridport, such as Bell Bay by Tasports;
- Investigate different (lower quality) diesel supply for non-power station use by Tasports;
- Development of closer ties with the King Island Council could to facilitate strategic fuel planning.

Table 8: Supply Chain Optimisation Assessment

Supply Chain Party	Supply Chain	%age of Total Supply Chain	Optimisation opportunity, Impact & Priority,
Tasports	LSD TGP	73.0%	<ul style="list-style-type: none"> • Yes • High Potential Impact • High Priority
Road- Sea Road Logistics	Transportation	9.0%	<ul style="list-style-type: none"> • Yes • Low Potential Impact • Medium Priority
Sea- Furneaux Freight			
Tasports	Storage	7.0%	<ul style="list-style-type: none"> • Yes • Low Potential Impact • Medium Priority
	Distribution		
	Other		
Commercial Entity	Retail	9.0%	<ul style="list-style-type: none"> • Yes • Medium Potential Impact • Medium Priority

4. Options

This section outlines alternative fuel supply options, principally infrastructure related, with the objective to provide lower cost fuel to the Island.

The options identified are summarised in the table below, and were identified in discussions with Tasports representatives.

Table 9: Options Summary

Option	Name	Description
1	Status Quo	<ul style="list-style-type: none"> Road transport of ISO tanks from Burnie to Bridport Sea vessel freight of ISO Container to Island Transfer of ISO to Tank Farm Distribution & Retail as per status quo A new fuel truck is required to replace an ageing vehicle.
2	Bulk Fuel on Vessel, <u>new fuel line</u> to Bulk Storage Facility	<ul style="list-style-type: none"> Road transport of ISO tanks from Burnie to Bridport Bulk fuel on sea vessel freight to Island 600m New fuel line & manifold to transfer fuel to Tank Farm Distribution & Retail as per status quo A new fuel truck is required to replace an ageing vehicle.
3	ISO Container Storage (non-use of Bulk Storage Facility)	<ul style="list-style-type: none"> Road transport of ISO tanks from Burnie to Bridport Sea vessel freight of ISO Container to Island Transfer of ISO to Tank Farm or new site (non-use of Tank farm) Distribution & Retail as per status quo A new fuel truck is required to replace an ageing vehicle.

4.1 Option 1- Status Quo (Base case)

Overview

This option is the status quo and base case to compare and differentiate the alternatives. This option is described in detail in section 2 of this Study. There are opportunities to yield lower fuel process to the Island under this scenario, see section 2.3.

Included in this option is the replacement of the existing fuel distribution truck- the current vehicle is at end of life.

Cost Consideration

Operating and Maintenance (O&M) costs are recurring for the infrastructure owners in the supply chain and included in Tasports costs.

Tasports have provided a cost estimate for a new truck to replace the old, ageing tanker at between \$150,000 and \$200,000.

NPV Result

NPV **-\$200,000**

NPV Result is based on:

- Discount rate: 10%
- Project life : 20 Years
- Capex for new replacement fuel distribution truck of \$200,000
- Terminal value: Nil

Revision 2 - For release

Refer Appendix 5 for detail.

4.2 Option 2 - Bulk Fuel on Vessel, New Fuel line to Bulk Storage Facility

Description

Under this option, fuel is transported to the Island by Furneaux in bulk fuel tanks in the vessel, rather than ISO Containers on deck.

While the vessel is being unloaded, fuel is then pumped from the vessel bulk tanks via a manifold and pump at the Lady Barron wharf into a new 100mm pipeline to transport the fuels to the Lady Barron Bulk Fuel Facility approximately 550 m. The new fuel pipeline and works at the wharf would require approvals and the pipeline an easement, presumably over Council land.

Figure 4: Lady Barron Wharf and Bulk Fuel facility



Source: Google Earth

Cost Consideration

Furneaux

Tasports have yet to receive revised costing from Furneaux for use of the bulk fuel tanks in vessel. It is anticipated that Furneaux will price "Bulk Fuel freight" on vessel in parity with the current ISO Tank freight (on deck) so that this option has negligible margin and revenue impact to Furneaux's business.

It is understood that free deck space would be forgone as the vessel is rated by weight rather than deck space.

Tasports

Tasports have provided an order of magnitude cost (preliminary) estimate of \$697,000 (including 30% contingency) to supply and install up to 600m of a pipeline and manifold.

Table 10: Preliminary Cost Breakdown (Tasports)

	\$	per lineal m	%age of Total
Manifold	50,000	\$ 83	9.3%
Labour (project management)	80,000	\$ 133	14.9%
Pipework & Valves (600m of pipe)	180,000	\$ 300	33.6%
Fire monitor	20,000	\$ 33	3.7%
Oil Spill	10,000	\$ 17	1.9%
Bund	30,000	\$ 50	5.6%
Security	15,000	\$ 25	2.8%
Fire Alarm & Control	30,000	\$ 50	5.6%
Brigade Booster Facility	10,000	\$ 17	1.9%
Rework to Electrical Supply	10,000	\$ 17	1.9%
Design Cost	80,000	\$ 133	14.9%
Approvals & Certification	1,100	\$ 2	0.2%
Defects & Liability	5,000	\$ 8	0.9%
Mob & Demob	15,000	\$ 25	2.8%
Subtotal	536,100	\$ 894	100.0%
Contingency (at 30%)	160,830		
Total	696,930		
Pipe m	600		
O&M Costs (% of Capex)	10,454	1.5%	

O&M costs of 1.5% of CAPEX have been assumed as recurring which equates to \$10,500 per annum (covering power costs and compliance costs)

NPV Result

NPV **-\$1,005,002**

NPV Result is based on:

- Discount rate: 10%
- Project life : 20 Years
- Capex of \$697k for new fuel line to Bulk Fuel Facility
- Capex for new replacement fuel distribution truck of \$200 k
- Terminal value: Nil

Refer Appendix 5 for detail.

4.3 Option 3 – Additional ISO Container Storage (non-use of Bulk Storage Facility)

Description

Under this option, fuel is transported to Bridport and then to the Island in ISO Containers (status quo). The ISO Containers are then transported by truck to the Bulk Fuel Facility (or a new site) in adequate numbers to ensure security of supply for the power station.

Based on preliminary analysis a total of seven (7) ISO containers would be required to ensure that security of supply is not compromised.

There may be opportunity for Tasports to utilise the existing fleet of nine (9) ISO Containers more efficiently.

Table 11: Island Security of Supply Needs- ISO Containers Equivalents

	2013/14				
	LSD	LSD	ULP	PULP	Total
	Hydro	Other	Total	Total	
Fuel	905,220	893,335	635,014	58,800	2,492,369
Security of Supply - days	28	28	7	7	
Security of Supply - L	69,442	68,530	12,178	1,128	151,277
ISO L	25,230	25,230	25,230	25,230	
ISO # Equivalents	2.75	2.72	0.48	0.04	6.0
Say	3	3	1	-	7

Source – refer Appendix 4

Given that fuel turnover on the Island is steady; storage of fuel in ISO's rather than existing Tanks at the Bulk Fuel Facility is feasible. There are compliance and regulation matters that require attention, but these could not be managed through proper design principles. This has been confirmed with Phil Kemm (Haschem, Mb: 0417 000 417) via telephone.

This option may render the Tasports tank farm somewhat redundant. Accordingly the Lady Barron Bulk Fuel Facility could be remediated and redeveloped for alternative uses and a new site located for storage of the ISOs.

The current Tasports book (depreciated accounting value) of the Bulk Fuel Facility at Lady Barron is approximately \$200,000.

Costs to remediate the existing site or land cost to acquire a new site and associated infrastructure costs have not been included in the project modelling.

Cost Consideration

Tasports

Based on current fuel usage on the island, up to 7 ISO containers may be required. Tasports may incur additional ISO Container lease costs of \$38,000 per annum (should an additional 5 containers be required- based on approximately \$7,539 per annum per ISO).

Land costs of a new site or a new facility to store the ISO Container's has not been included, nor has any remediation costs for the existing facility at Lady Barron if its useful life is terminated.

The existing truck that Tasports own and operate at Lady Barron will be used to transport the ISO Containers from the vessel to the storage site.

NPV Result

NPV **-\$815,056**

NPV Result is based on:

- Discount rate: 10%
- Project life : 20 Years
- Additional ISO Container Lease cost: \$38k per annum (5 additional ISO Containers)
- Capex for new replacement fuel distribution truck of \$200k
- Land costs of a new site or a new facility to store the ISO Container's has not been included
- Terminal value: Nil

Refer Appendix 5 for detail.

4.4 Option Assessment

In assessing the options available to ensure a more efficient fuel supply for the Island, regard to the following has been made:

- Economic considerations, such as capital, operating and maintenance costs (O&M), Net Present value;
- Environmental issues;
- Safety issues;
- Security of supply; and
- Other (ability to deliver real savings to customers).

Table 12: Option Assessment

		Option 1	Option 2	Option 3
		Status Quo (base case)	Bulk Fuel on Vessel, <u>new fuel line</u> to Tank Farm	ISO Container Storage (non-use of Tank Farm)
Economic	Capital	<ul style="list-style-type: none"> \$200 k investment in new truck and tanker 	<ul style="list-style-type: none"> \$697 k new capital investment required \$200 k investment in new truck and tanker 	<ul style="list-style-type: none"> Nil - Site remediation required by Tasports not included. \$200 k investment in new truck and tanker
	O&M	<ul style="list-style-type: none"> Existing tank farm is ageing and requires maintenance (e.g. new / replacement of pumps etc. in next few years) 	<ul style="list-style-type: none"> O&M estimated at 1.5% of capex or \$10K per annum. Existing tank farm is ageing and requires maintenance. 	<ul style="list-style-type: none"> Additional lease cost for ISO Containers (\$50k pa)
	NPV	<ul style="list-style-type: none"> -\$200,000 	<ul style="list-style-type: none"> -\$1,005,002 	<ul style="list-style-type: none"> -\$815,056
Environment		<ul style="list-style-type: none"> Tank farm site is ageing. 	<ul style="list-style-type: none"> Tank farm site is ageing. Planning approval / facilitation by Council is required 	<ul style="list-style-type: none"> Tank farm site is ageing. Once the site is abandoned remediation will required by Tasports Existing site would require bunding and spill upgrade. Alternative site used would require Bunding and new site works
Safety		<ul style="list-style-type: none"> New truck will have up to date safety 	<ul style="list-style-type: none"> Fewer truck movement to Tank Farm 	<ul style="list-style-type: none"> Increased ISO tank movement Existing site would require bunding and spill upgrade. Alternative site used would require Bunding and new site works
Security of Supply		<ul style="list-style-type: none"> 4 weeks supply to PS is maintained at tank farm 	<ul style="list-style-type: none"> 4 weeks supply to PS is maintained at tank farm 	<ul style="list-style-type: none"> 7 ISO Containers are equivalent to 28 days supply
Other		<ul style="list-style-type: none"> Site is visible as bulk fuel storage 	<ul style="list-style-type: none"> Site is visible as bulk fuel storage 	<ul style="list-style-type: none"> Site could be resumed for Community use and alternative site used (Bunding and site work required)
Ranking		<ul style="list-style-type: none"> 1st 	<ul style="list-style-type: none"> 3rd 	<ul style="list-style-type: none"> 2nd

4.4.1 Option Ranking

Based on a discount rate of 10% and 20 year project life, Option1 (status quo) is the best performing option at this juncture. This option with optimisation such as re-negotiation of the supply chain is best placed to yield lower fuel costs landed onto the Island.

The rationale for this is:

- Fuels supply/ commodity represents 81% of the landed cost of fuel to the Island;

- The existing fuel supply arrangement between Tasports and BP has recently expired and renegotiation of an arrangement may yield a real saving on the Island and at the pump; and
- The existing fuel supply arrangement between Tasports and BP has recently expired and re-sourcing fuels at a location closer to Bridport, ie Bell Bay. may yield a real saving (to a much lesser extent) on the Island and at the pump.

Pursuit of supply chain optimisation will allow Tasports to assess triggers points that bring other options (not limited to Option 2 and 3) to be explored without adverse or unintended consequences.

4.4.2 Sensitivity Analysis

Sensitivity analysis of the financial model was undertaken to the following key assumptions:

- Discount rate (modelled 10%, sensitivity undertaken by altering the discount rate to 12% and 15%); and
- Contingency percentage of capex (modelled 30%, sensitivity undertaken by altering the contingency to 20% and 10%).

As a result of the above scenario analysis:

- Option 1 (Status quo) has a better NPV result than Option 2 (New fuel Line) and Option 3 (ISO Container storage) in all scenarios, albeit a negative NPV;
- Option 3 (ISO Container storage) is preferred over Option2 (New fuel Line).

Table 13: NPV Results & Sensitivity

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Discount Rate (WACC)	10.0%	10.0%	10.0%	12.0%	12.0%
Long-term Inflation	2.5%	2.5%	2.5%	2.5%	2.5%
Contingency	30.0%	20.0%	10.0%	30.0%	20.0%
Total Capex	\$ 696,930	\$ 643,320	\$ 589,710	\$ 696,930	\$ 643,320
NPV Option 1	-\$200,000	-\$200,000	-\$200,000	-\$200,000	-\$200,000
NPV Option 2	-\$1,005,002	-\$943,078	-\$881,155	-\$990,563	-\$929,750
NPV Option 3	-\$815,056	-\$815,056	-\$815,056	-\$717,305	-\$717,305

	Scenario 6	Scenario 7	Scenario 8	Scenario 9
Discount Rate (WACC)	12.0%	15.0%	15.0%	15.0%
Long-term Inflation	2.5%	2.5%	2.5%	2.5%
Contingency	10.0%	30.0%	20.0%	10.0%
Total Capex	\$ 589,710	\$ 696,930	\$ 643,320	\$ 589,710
NPV Option 1	-\$200,000	-\$200,000	-\$200,000	-\$200,000
NPV Option 2	-\$868,938	-\$974,070	-\$914,526	-\$854,982
NPV Option 3	-\$717,305	-\$610,999	-\$610,999	-\$610,999

Source – refer Appendix 5

5. Key Findings & Conclusions

5.1 Key Findings & Conclusions

Key findings and recommendations of the Study are listed below.

1. Fuel is sourced by Tasports from Centrel Pty Ltd (a BP Group Company) in Burnie, Tasmania.
2. Tasports sources significant volumes of fuel state wide (approximately 12 million litres per annum). There is an opportunity for Tasports to formalise the strategic procurement of fuel which may yield a lower fuel cost to users on the Island.
3. Tasports acquired the Lady Barron bulk fuel facility on the Island from BP on 1 June 1994.
4. There is an opportunity for Tasports to negotiate a new commercial arrangement with the current or new suppliers, and possibly closer to Bridport, such as Bell Bay (to negate road transport costs) that can reduced fuel prices landed on the Island.
5. Pursuit of supply chain optimisation is best placed to yield lower fuel costs landed onto the Island and will allow Tasports to assess triggers points that bring other options (not limited to Option 2 and 3) to be explored without adverse or unintended consequences. The rationale for this is primarily driven by the fuel supply/ commodity represents 81% of the landed cost of fuel to the Island.
6. The fuel (or commodity) is the majority of the cost of fuel on the Island, and represents approximately 81% of the supply chain:
 - Fuel Supply/Commodity: 73%
 - Transport (road & sea): 9%
 - Wholesale (storage & distribution): 9%
 - Retail: 9%
7. Fuel supplies to Island in 2013/14 are approximately 2,500,000 L (Tasports forecast 2013/14). Low Sulphur Diesel (LSD) fuel accounts for 72% of all fuels imported to the Island.
8. The bulk of LSD (40%) is used for power generation at the Whitemark Power Station (Power Station) followed by consumption by other commercial (such as Primary production) and domestic uses (approximately 893,000L). The remaining fuel types are Unleaded Petrol (ULP) and Premium Unleaded Petrol (PULP) which are used predominately for passenger vehicles on the Island.
9. Tasports have long term commitments to maintain LSD bulk supply to Hydro for the Whitemark Power Station. Tasports also have contractual obligations with Hydro Tasmania to maintain 28 days of supply of LSD for power generation use.

10. Hydro requires diesel fuel to be LSD which is a premium quality fuel. The diesel sourced for other Island users may be in excess or superior to user's needs. There is an opportunity to source lower quality diesel fuel at reduced cost that would benefit Island users.
11. The generation profile of the Whitemark Power Station significantly influences the profile of fuel supply to the Island and hence the supply chain. Should this alter or change into the future (i.e. reduced demand or addition of new renewable generation capacity through solar, biodiesel or wind projects) there is likely to be a significant impact on fuel supplies to the Island. Council and Tasports should engage Hydro regarding long term capacity and generation forecasts that could have implications for the fuel supply chain.
12. Cheaper fuel from discount suppliers can be landed on the Island in Intermediate bulk container (IBC) containers that avoid Tasports' storage cost associated with bulk supply, but doesn't satisfy security of supply concerns to the Island in general.
13. Tasports own and maintain the retail pumps (fuel bowsers) on the Island for both service stations.
14. Retail pump prices on the Island in the week starting 5 May 2014 were:
 - LSD 206.0 cents per litre (inc GST)
 - ULP 203.5 cents per litre (inc GST)
 - PULP 207.3 cents per litre (inc GST)
15. Retail LSD pump prices on King Island and Flinders Island are comparable:
 - Flinders Island 206.0 cents per litre (inc GST)
 - King Island 203.0 cents per litre (inc GST)
16. Average wholesale prices on the Island in the week starting 5 May 2014 were:
 - LSD 187.1 cents per litre (inc GST)
 - ULP 187.3 cents per litre (inc GST)
 - PULP 196.7 cents per litre (inc GST)
17. Retail margin of around 16 cents per litre on the Island reflect a lack of competition and are considered high compared to main-land margins.
18. Tasports could give consideration to publishing to Council its supply prices to give some transparency to wholesale and transportation cost, subject to confidentiality requirements.
19. Council could benchmark retail and wholesale cost on a regular basis for reporting to Council's Shipping Committee. Closer ties with the King Island council could facility this.

20. The Supply chain has many parties, such as BP, Centrel Pty Ltd, Sea Road Logistics, Furneaux Freight, Tasports, and Retail Supermarkets on the Island. Each party earns a return or margin for their asset, supply or service or material.
21. The supply chain is broadly cost reflective, which each party making a commercial return on investment. The supply chain is inefficient with multiple handling of the fuel to reach the end user.
22. Infrastructure on the Island, particularly Tasports Bulk Fuel Facility at Lady Barron, and associated infrastructure (truck to distribute fuel around the island), is ageing and will require ongoing maintenance (fuel tanks, pumps etc.) and replacement (truck) which may add pressures to the wholesale component of landed fuel on the Island.
23. There are opportunities to “squeeze” the supply chain to yield a lower pump price on the Island, but is complicated that there are many parties.
24. Tasports have yet to receive revised costing from Furneaux for use of the bulk fuel tanks in vessel. Tasports should inquire of Furneaux freight as to costing for bulk fuel service.
25. Council is not a party to any of the supply chain commercial arrangements, and has limited ability to reduce the price on the Island other than by lobby or facilitation.
26. The transfer price by Tasports to Hydro for Island power generation is approximately 3 to 4 c/L lower than to other users on the Island. In overall terms, this in effect is not significant (\$35,000 per annum).
27. The cost of freight to the Island for LSD amounts to approximately 9% or approximately \$300,000 (ex GST). The cost of freight for all fuel to the Island in 2013/14 is expected to be approximately \$400,000 (ex GST).
28. The cost of fuel freight to the Island has been the subject of recent review in 2012 (GHD report to the Department of Infrastructure Energy, Resources, Tasmania; Furneaux Shipping Report).

5.2 Study Actions

Key Actions arising from the Study recommendations are summarised in the table below.

Actions have been grouped by time frame, being short (0 to 1 year), medium (1 to 5 years) and Long Term (5 to 10 year) actions to consider.

Table 14: Study Actions

Timeframe	Party	Action title	Action detail
Short Term (now to 1 Yr horizon)	Tasports	Optimisation of Current Supply Chain	Review and formalisation of strategic procurement of fuel.
			Negotiation of new commercial arrangement with the current or new suppliers, and possibly closer to Bridport, such as Bell Bay.
			Investigate different (lower quality) diesel supply for non-power station use.
	Bulk Fuel Shipping by Furneaux	Furneaux Freight costing for bulk fuel service to the Island.	
		Benchmarking	Reporting (say quarterly) of supply prices (ex GST) to provide transparency to wholesale and transportation cost.
Council	Benchmarking	Reporting (say quarterly) of retail prices (including GST) to provide transparency to retail prices on the Islands. Development of closer ties with the King Island council could to facilitate strategic fuel planning.	
Medium Term (1 to 5 Yr horizon)	Tasports & Council	Strategic Planning	Engage Hydro regarding long term power generation on the Island to assess implications for the fuel supply chain.
	Council	Strategic Planning	Development of Strategic Planning for Fuel Supply to the Island.
Long-term (5to 10 Yr horizon)	Tasports	Asset Planning	Consideration and treatment of existing asset (Bulk fuel facility) at Lady Barron and remaining useful life. Consideration given to existing asset life and alternate options.

Appendix 1- Fuel Fact Sheet (www.aip.com.au)

FACTS ABOUT DIESEL PRICES	AIP Australian Institute of Petroleum
The price of diesel in Australia is dependent on international market prices, not production costs	
<ul style="list-style-type: none"> ⇒ Crude oil, diesel and petrol are different products and are bought and sold in their <u>own markets</u>. ⇒ Each market is <u>regionally based</u> and there are linkages and transactions <u>between regional markets</u>. ⇒ <u>Diesel prices</u> in regional markets reflect the supply and demand balance in <u>each market</u>. ⇒ So, diesel prices (like most commodity prices) are determined by market forces, not by the cost to produce it. ⇒ Australia's regional market for petroleum products is the <u>Asia-Pacific market</u>. ⇒ Diesel is the dominant fuel in the Asian region and in recent years there has been a <u>significant increase in demand</u>, particularly as a result of the economic and industrial growth in China and India; Australian demand for diesel has also grown strongly, particularly on the back of the mining and commodity boom. ⇒ Regional diesel supply has not kept pace with this demand growth and, as a result, <u>diesel prices have increased</u> in the region including Australia. ⇒ The Singapore price of diesel (Gasoil 10ppm sulfur) is the key <u>diesel pricing benchmark</u> for Australia. 	
Australian refineries must price their output to be competitive with Asian imports	
<ul style="list-style-type: none"> ⇒ To meet Australian diesel demand, over 40% of diesel is imported, mostly from Singapore, Korea and Japan. ⇒ Australian refiners must price diesel to be competitive with imports (ie. import parity) from the Asian region; if diesel prices were lower here, this would provide an incentive to Australian refiners to export diesel to Asia. ⇒ Growing demand for diesel in Australia will continue to be largely met by imports in the future, further strengthening the price relationship with Asian diesel prices. ⇒ The Australian <u>wholesale prices</u> for diesel (including spot Terminal Gate Prices or TGPs) are closely linked to the Singapore price of diesel – <u>not crude oil prices</u>. ⇒ The Singapore benchmark price of diesel plus shipping costs and Australian taxes represents almost <u>the entire wholesale price of diesel</u> – typically around 95% of TGPs. ⇒ The remaining 5% of TGPs reflect insurance, local wharfage and terminal costs and a small wholesale marketing margin (where competitively possible). ⇒ Generally, there is a <u>short time lag</u> of 1-2 weeks between changes in Singapore prices and changes in Australian TGPs, and this lag operates when prices are both rising and falling. ⇒ Daily TGP data are published by all wholesale suppliers (AIP website has average TGPs - www.aip.com.au). 	
Most diesel is sold in bulk through commercial contracts, not through retail outlets	
<ul style="list-style-type: none"> ⇒ TGPs are typically around 95% <u>of the diesel pump price</u>. Apart from TGP, <u>pump prices</u> in Australia also reflect land transport costs, marketing and administration costs, and the costs of running service stations like wages, rent and utilities. <u>The ability to cover these costs depends on local area competition</u>. ⇒ Most diesel is sold in bulk to commercial and industrial customers (eg. in mining, transport and farming) on long term contract; such contracts are subject to rigorous competition under regular market tenders. ⇒ There is no retail <u>discounting cycle</u> (ie. sawtooth pattern) for diesel, as only 25% of diesel is sold through retail outlets and most of this goes to contract or fuel card customers rather than private motorists. ⇒ The <u>major oil companies</u> directly own and operate only a limited number of service stations across Australia (around 10%) and these are <u>largely in metropolitan areas</u>. 	
Low sulfur diesel is a high quality fuel and delivers more kilometers per litre than petrol	
<ul style="list-style-type: none"> ⇒ To meet the low sulfur fuel standard for Australian diesel (10ppm sulfur from 1 January 2009) requires extensive processing in the refinery to remove the sulfur from the crude oil, similar to that required for low sulfur petrol. ⇒ Tighter diesel fuel standards are delivering dramatic reductions in vehicle emissions (including particulate emissions and black smoke), providing significant air quality improvements in major cities and towns. ⇒ Because diesel has a higher energy content than petrol, it delivers more kilometres for each litre of fuel consumed (particularly when combined with new efficient diesel engines). 	
Australia's highly competitive market has delivered low diesel prices by world standards	
<ul style="list-style-type: none"> ⇒ When comparing Australian diesel prices to other countries, allowance must be made for different government taxes and tax rates and for any subsidies and road user charges (eg. in New Zealand) that don't apply here. ⇒ Vigorous competition also means that the profits made by fuel suppliers are typically <u>a very small proportion</u> of the retail price (eg. average industry profit over the last decade is around <u>2 cents per litre of all fuels sold</u>). 	

Appendix 2 – Australian Fuel Rebate

Fuel users on the Island are able to claim a fuel rebate through the tax system via its business activity statement (BAS) returns. Fuel tax credit rates vary depending on the fuel used and the activity the user uses it in. Fuels that can be claimed are petrol, diesel and other combustible fossil fuels such as kerosene, mineral turpentine, white spirit, toluene, heating oil and some solvents.

Table 1 below is an abridged summary of fuels and rebates that are eligible from 1 July 2013.

Table A2-1: Abridged Fuel tax credit rates for taxable liquid fuels, from 1 July 2013

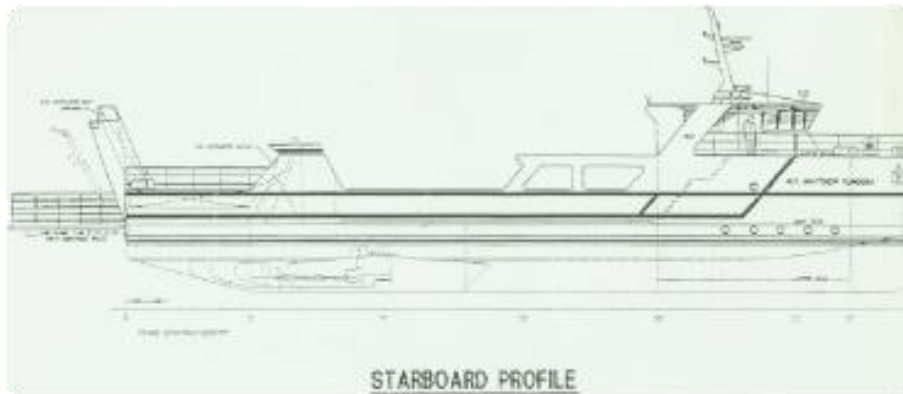
Business use	Eligible liquid fuel	Rate for fuel acquired from 1 July 2013
In a heavy vehicle for travelling on a public road	Liquid fuels – for example, diesel or petrol	12.003
Specified off-road activities in: agriculture, fishing, forestry	Liquid fuels – for example, diesel or petrol	38.143
Other off-road activities where the fuel is combusted – for example: electricity generation by a commercial generation plant, stationary generator or a portable generator, construction, manufacturing	Petrol	32.347
	Diesel and other liquid fuels	31.622
To power auxiliary equipment of a heavy vehicle*travelling on a public road – such as fuel used to power a refrigeration unit or a concrete mixing barrel	Liquid fuels – for example, diesel or petrol	38.143

Source : <https://www.ato.gov.au/Business/Fuel-schemes/In-detail/Fuel-tax-credits---for-GST-registered-businesses/Calculating-and-record-keeping/Fuel-tax-credit-rates>

Appendix 3 - Island Fuel Related Infrastructure

Infrastructure related to the supply of fuel the Island is depicted below.

Figure A3-1: Matthew Flinders Freight Vessel



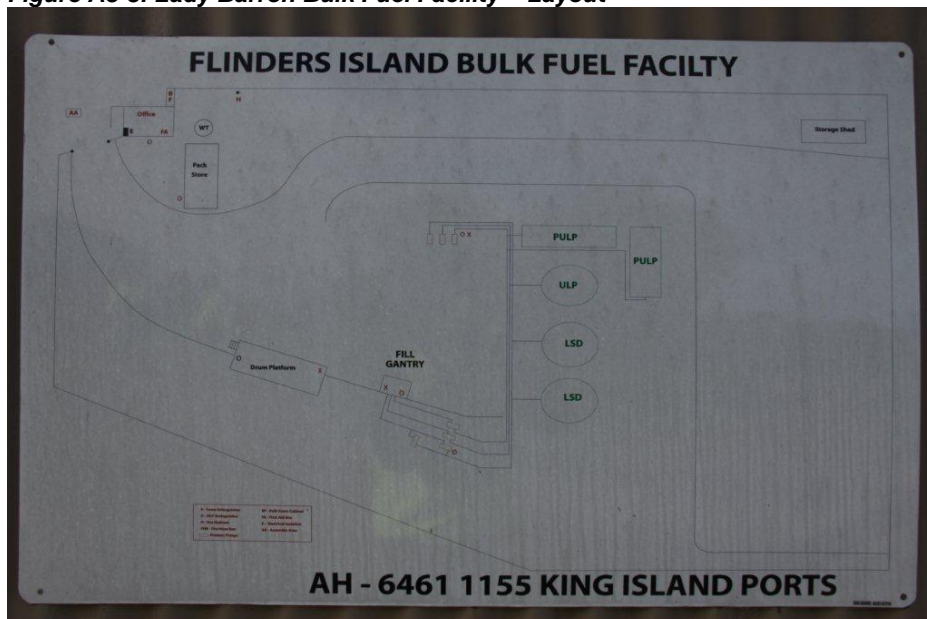
<http://furneauxfreight.com.au/>, May 2014

Figure A3-2: Tasports Lady Barron Wharf



Tasports, May 2014

Figure A3-3: Lady Barron Bulk Fuel Facility – Layout



Tasports, May 2014

Figure A3-4: Lady Barron Bulk Fuel Facility - Storage Tanks



Tasports, May 2014

Figure A3-5: Lady Barron Bulk Fuel Facility – Pump Station



Tasports, May 2014

Appendix 4 - Data Summary

A4.1 Consumptions

Litres ('000)	2009/10	2010/11	2011/12	2012/13	2013/14		
	Actual	Actual	Actual	Actual	Actual YTD	Forecast	Budget
LSD	1,952	1,751	1,866	1,756	1,499	1,799	1,832
LSD _ Power Station	1,156 (59%)	1,020 (58%)	1,082 (58%)	938 (53%)	na	905 (50%)	na
LSD _ Other	796 (41%)	731 (42%)	784 (42%)	818 (47%)	na	893 (50%)	na
ULP	616	558	642	608	529	635	627
PULP	61	50	48	46	49	59	48
Total	2,629	2,359	2,556	2,410	2,077	2,492	2,507
ISO Equivalents (#)	105	94	102	96	83	99	100
Movements per week	3.00	2.00	2.00	2.00	2.00	2.00	2.00

A4.2 ISO Container

ISO Container	L	25,230
ISO Container Lease Cost	\$/pa	\$,7539

A4.3 Furneaux Freight Charge - to Flinders/ ex Bridport

Total	\$	\$ 2,624
Avg Cost/ L	c/L	10.40

A4.4 Sea Road Logistics Freight Charge – Burnie to Bridport

Return		\$ 1,113
Levy		\$ 193
Avg Cost/ L	c/L	5.18

A4.4 Tasports Wharfage Cost

Wharfage		\$ 350
Avg Cost/ L	c/L	1.39

A4.5 Terminal Gate Price (TGP) Proxy

LSD	c/L	152.0
ULP	c/L	147.5
PULP	c/L	na

A4.6 Wholesale Pricing (c/L)

Wholesale Pricing (c/L)	LSD		ULP		PULP	
	Ex GST	Inc GST	Ex GST	Inc GST	Ex GST	Inc GST
Hydro	167.1	183.8				
Service Stations	170.4	187.4	169.5	186.5	178.1	195.9
Retail	172.4	189.7	171.6	188.77	180.2	198.18

A4.7 Retail Pump Pricing (c/L)

Retail Pricing (c/L)	LSD		ULP		PULP	
	Ex GST	Inc GST	Ex GST	Inc GST	Ex GST	Inc GST
Walker's Supermarket 7 May 2014	187.3	206.0	185.0	203.5	188.5	207.3

A4.8 Financial data : Tasports 30 April 2014

\$'000	Budget	YTD 30 April 2014	Annualised
Revenue	3,293	3,545	4,253
Purchases	2,890	3,166	3,799
Gross Margin	404	378	454
Total Expenses	268	312	374
Depreciation	1	1	1
EBIT	135	65	79
Gross Margin: Revenue %	12.3%	10.7%	10.7%
EBIT: Revenue %	2.3%	2.2%	2.2%
Budget Litres	2,507	2,077	2,492
EBIT: Litres c/L	5.38	3.15	3.15
Target EBIT: Litres c/L	6.00	6.00	6.00

A4.9 Macro Assumptions

Discount Rate	10.0%
CPI escalation	2%
GST	10%

Appendix 5 – NPV Summary

NPV Results & Sensitivity	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 12	Scenario 13	Scenario 14	Scenario 15	Scenario 16	Scenario 17	Scenario 18	Scenario 19	Scenario 20	
Discount Rate (WACC)	10.0%	10.0%	10.0%	12.0%	12.0%	12.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	
Long-term Inflation	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Contingency	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	
Capex	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	
NPV Option 1	\$1,005,002	\$843,078	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
NPV Option 2	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	
NPV Option 3	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	\$815,056	
Status Quo (Replacement Truck)																					
Period	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
EBITDA	\$0	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	
Capex Costs	\$-200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Opex Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Additional Opex Costs Incurred	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Changes in Working Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Terminal Value	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Discounted Cash Flows	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
Cumulative Discounted Cash Flows	\$0	\$910,910	\$1,791,065	\$2,660,815	\$3,529,653	\$4,397,723	\$5,265,793	\$6,133,863	\$7,001,933	\$7,870,003	\$8,738,073	\$9,606,143	\$10,474,213	\$11,342,283	\$12,210,353	\$13,078,423	\$13,946,493	\$14,814,563	\$15,682,633	\$16,550,703	
Investment Analysis																					
Present Value of Forecast Cash Fl	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
Present Value of Terminal Value	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total NPV	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
Option 2																					
Period	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
EBITDA	\$0	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	
Capex Costs - Fuel Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Capex Costs - Truck	\$-696,930	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Opex Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Additional Opex Costs Incurred	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Changes in Working Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Terminal Value	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Discounted Cash Flows	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
Cumulative Discounted Cash Flows	\$0	\$910,910	\$1,791,065	\$2,660,815	\$3,529,653	\$4,397,723	\$5,265,793	\$6,133,863	\$7,001,933	\$7,870,003	\$8,738,073	\$9,606,143	\$10,474,213	\$11,342,283	\$12,210,353	\$13,078,423	\$13,946,493	\$14,814,563	\$15,682,633	\$16,550,703	
Investment Analysis																					
Present Value of Forecast Cash Fl	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
Present Value of Terminal Value	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total NPV	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
Option 3																					
Period	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
EBITDA	\$0	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	\$1,025,000	
Capex Costs - Truck	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Capex Costs - Fuel Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Opex Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Additional Opex Costs Incurred	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Changes in Working Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Terminal Value	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Discounted Cash Flows	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
Cumulative Discounted Cash Flows	\$0	\$910,910	\$1,791,065	\$2,660,815	\$3,529,653	\$4,397,723	\$5,265,793	\$6,133,863	\$7,001,933	\$7,870,003	\$8,738,073	\$9,606,143	\$10,474,213	\$11,342,283	\$12,210,353	\$13,078,423	\$13,946,493	\$14,814,563	\$15,682,633	\$16,550,703	
Investment Analysis																					
Present Value of Forecast Cash Fl	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	
Present Value of Terminal Value	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total NPV	\$0	\$910,910	\$881,155	\$869,750	\$868,838	\$874,070	\$854,526	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	\$854,882	