Fish Processing Plant

Environmental Effects Report

for Poulos Bros Seafood Pty Ltd
at 19 Greenbanks Rd, Bridgewater

July 2009
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1 SEAM is an environmental consultancy service specialising in a range of environmental management services including environmental assessments and environmental management plans for new and existing developments. A principal of the service is to strive for sustainable management of our resources.
Summary

This Environmental Effects Report (EER) has been prepared to provide supporting information for a permit under the Land Use Planning and Approval Act 1993.

The following parameters form the basis of the development:

- future operations will be of a lesser scale to the existing operations at the Hobart Fish port;
- a maximum of 10,000 tonnes per annum of fish will be processed; and
- products will consist mostly of marine farmed salmon, shellfish (lobsters, oysters, scallops and mussels), trawl fish and other fish harvested on a seasonal variation (orange roughie, dory, calamari, octopus and all market fish). Salmon from Macquarie Harbour will not be processed at this facility.

The key environmental management issues and recommended measures to mitigate impacts are listed:

1. The operations will continue to focus on dry clean up of any fish waste and diligent attention to management of floor drains to minimise any solids to sewer.

2. Wastewater will be disposed of to the existing sewage connection within the premises. Discharge levels will not exceed any trade waste agreement. Poulos will also install an off line 3000L storage tank for any fish oils or sludge. Material will be removed within 7 days when processing and monthly at other times

3. Solid fish waste will be taken off site by Veolia to the existing fish meal plant at Triabunna. Solid fish waste will be stored in marked crates in a coolroom and held for not greater than 48 hours

4. Odour management is linked to attention to good house keeping. Good housekeeping will continue to be a feature of the fish processing operations by Poulos Bros.
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Foreword

Poulos Bros Seafoods Pty Ltd have been operating a fish processing plant processing approximately 3000 tonnes per annum (tpa) at the Hobart Fish Port since May 2004 and prior to that at Margate since 1986 and at Bicheno since 1978. The company proposed to relocate its operations to the new Brighton transport Hub to secure its own premises thus providing more security of operations and to take advantage future transport options for its operations. The upper limit of production is anticipated to be 10,000 tpa.

Poulos Bros Seafoods Pty Ltd is a family owned and operated business servicing all aspects of the seafood requirements of the Sydney NSW Retail, Food Service and Hospitality industries. Also operating in Pyrmont, New South Wales and at the Sydney Fish Markets, the company was established in 1968 by Con and Denis Poulos. Today, Poulos Bros Seafoods Pty Ltd. with its Associated Companies is one of the largest distributors, processors, importers, exporters and retailers of fresh and frozen seafoods and related food products in Australia. Poulos Bros also have Processing factory and Wholesale outlet in Brisbane (Seatraders Pty Ltd)

In Sydney, Poulos Bros Seafoods Pty Ltd supplies by a fleet of refrigerated trucks on a daily basis:
- Fresh Fish and Shellfish
- Frozen Seafoods
- Frozen Potato Chips
- Catering Products
- Food Service Requirements
- Retail Requirements

The company also assists with bulk sales for resellers and distributors, and provides representation and agency arrangements for seafood producers and manufacturers both domestically and internationally.

Through their Export Division, they provide FCLs (Full Container Loads) of various Australian seafood products around the world. At Peter’s Fish Market, Poulos Bros Seafood Pty Ltd provides the local retail market with high quality seafood available at competitive pricing.

This report is presented following the issue of Guidelines for an Environmental Effects Report by the Environment Protection Authority on 22 June 2009.

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2 Poulos Brothers Seafoods Pty Ltd are a registered company A.C.N 55000596145
Background

This document, known as an Environmental Effects Report (EER) and is designed to be used in conjunction with the requirements of any environmental condition(s) imposed via a permit issued by the Brighton Council. Thus for Poulos Brothers, a similar requirement to the one specified in Environmental Permit Conditions for the Hobart Fish Port, namely that the development shall be in accordance with the DPEMP (EER in this case) is expected to be a condition of any new permit issued.

Planning matters are dealt with in a separate stand alone planning report. This EER is for the operation of a fish processing plant to process up to 10,000 tonnes per annum. A fish processing plant of this size is classified as a level 2 activity under the Environmental Management and Pollution Control Act 1994 (EMPCA).

As an occupant of a level two activity, Poulos Bros. Seafoods Pty Ltd is required to submit an EER and it is expected to be reviewed periodically. The EER details the likely impacts, works and operations to manage and control off site impacts to prevent and mitigate environmental harm.

The aim of the EER is to:

- Provide a basis for public consultation and informed comment on the project.
- Provide an overview of current and proposed operations at Poulos Bros. Seafoods Pty Ltd over the next year and foreseeable future, as well as detail environmental management practices as they relate to the management of air and noise emissions, solid and liquid wastes (by-products);
- Provide Poulos Bros. Seafoods Pty Ltd with a useful, dynamic reference that can be used with the company’s administrative systems and satisfies any regulatory requirements (eg. reporting obligations);
- Detail performance standards (such as those in regulations, standards or Codes of Practice) for the management of air and noise emissions, and solid and liquid wastes (by-products);
- Demonstrate Poulos Bros. Seafoods Pty Ltd commitment to a process of continual improvement in environmental performance and management, including waste management and energy reduction;
- Provide a basis for decision makers to consider the proposal and determine permit or conditions, and a mechanism to establish environmental conditions; and
- Outline timeframes for implementation of environmental programs or initiatives for continual improvement.

As well as fulfilling regulatory requirements, it is envisaged that preparation of this EER will also assist Poulos Bros. Seafoods Pty Ltd to achieve its corporate environmental management objectives.

Environmental Effects Report for Poulos Bros. Fish Processing Plant Brighton, Tasmania, July 2009
This document has been prepared in close consultation with the Environment Protection Authority (EPA). It is based on guidelines for an EER for a fish processing plant. It will be available for public comment at the offices of the EPA (Lands Building in Macquarie St) and at the Brighton Council.

The operations are expected to commence in late 2009; however the need to seek a permit that includes an assessment by the Board of Environmental Management and Pollution Control has necessitated this approval process. Once the development is advertised, comment must be received within 14 days from the date of the first advertising to the following body:

Brighton Council  
Council Officers  
17 Tivoli Road  
Brighton  
TAS 7030
PART A - PROPOSENT INFORMATION

Operator and Tenant

Poulos Bros Seafoods Pty Ltd
19 Greenbanks Rd, Bridgewater
PO Box 306 Hobart 7002
0417 332 014
sally@poulosbros.comau
ABN 55 000 596 145

Building Owner

Australian Fishing Industries Pty Ltd
PO Box 306
Hobart 7002
0417 332 014
ABN 14 001 493 009

Figure 1 Aerial photo of the proposed site

Sustainable Environmental Assessment and Management (SEAM)\(^3\) was commissioned by Poulos Bros. in early 2009 to prepare supporting documentation in the form of firstly a Notice of Intent (NOI) and for an Environmental Effects Report (EER) for a permit for the Fish Processing Plant Green point Rd, Brighton (Figure 1).

\(^3\) SEAM is an environmental consultancy service specialising in a range of environmental management services including environmental assessments and environmental management plans for new and existing developments. SEAM is committed to striving to meet best practice environmental management.
PART B PROJECT DESCRIPTION

Description of Project

The following form the basis of the development:

- Future operations will be of a lesser scale to the existing operations at the Hobart Wharf; initially no salmon will be processed from Macquarie Harbour and if Poulos do proceed with Macquarie Harbour fish processing then it commits to submit a satisfactory pathogen management plan to the EPA
- a maximum of 10,000 tonnes per annum of fish will be processed and
- products will consist mostly of marine farmed salmon, shellfish (lobsters, oysters, scallops and mussels), trawl fish and other fish harvested on a seasonal variation (orange roughie, dorey, calamari, octopus and all market fish).

The property is situated on the eastern shore of Greenbanks Rd in the developing Bridgewater Industrial estate, which is approximately 23 kms north of Hobart’s Central Business District. Greenbanks Road adjoins Crooked Billet Drive which interconnects with the Midland highway a short distance from the subject property. The Midland Highway is the major arterial route connecting Hobart with the north of Tasmania.

A layout of the premises is detailed in Figure 2 and the Factory Floor layout in Figure 3.

A copy of this EER, permit conditions and any associated documents referred to will be held in a location, which is known and accessible to the responsible person(s).

If there is an incident such as a spill of waste or chemicals, Poulos Bros will take every effort to minimise the emission of a pollutant and the threat of serious or material environmental harm. Poulos Bros also undertake to advise the appropriate authorities such as the EPA, Southern Water and the Brighton Council of such an incident.
Figure 2 Site Plan
Figure 3 Plan of Factory (note numbers in rooms refer to coolrooms)
The fish to be processed at the premises will include all those currently processed at Hobart fish Port. The main fish processed will be farmed Atlantic salmon. Other fish that may be processed at Brighton on a seasonal basis include:

- trawl fish
- calamari
- octopus
- lobster
- oysters
- mussels, and
- other market fish.

Poulos Bros Seafoods Pty Ltd. has an AQIS approval to operate under their AQIS Approved Arrangements Registered Establishment # 68 19 for processing the following products at Hobart:

- Freezing skinless and skin on fish fillet
- Freezing / Chilling scallop meat with roe
- Freezing Squid – whole, tubes, heads, tentacles, and tails / wings
- Freezing Head on gilled and gutted fin fish
- Freezing / Chilled Oyster in half shell
- Packing live shellfish

Fish will arrive at the Brighton factory in insulated bins by road transport and will be placed into chillers by folk lift and then tipped into the factory for processing. A flow chart of the operations of a typical fish plant is shown in Figure 4 and specific flow charts for differing fish types are provided in Appendix B.

There will be collections of product processed by pan tech trucks ranging in the capacity from 12 tonne to 20 tonne with freezer and chiller facilities. Vehicles will arrive and depart daily from the premises usually during day light hours although operations may occur at night. Solid waste products will also be removed daily in covered skip bins or bulk bins with lids.

Stock will be delivered on a regular basis by delivery vans and trucks of various sizes. Hours, employee numbers and freight movement will all depend upon product availability. There will be down and peak times.

The processed tonnage at Hobart over the past twelve (12) months has been approx 3,000 tonnes consisting mostly of marine-farmed salmon, shellfish (lobsters) and trawl fish. Because of the nature of this industry it is hard to determine future tonnage but they are likely to be similar to the current operations although the quantity will be affected by the quota system for some fish species (approximately 10,000 TPA is the likely upper limit.)
The existing operation runs on a 24 hour/7 day a week basis with the norm being 6am to 7pm 7 days per week and is not expected to change.

Infrastructure

The factory has 6 coolrooms as shown in Figures 3:
1. Coolroom 1 is a Blast Freezer operating at –30°C
2. Coolroom 2 is a chiller / freezer room (-2°C to -30°C)
3. Coolroom 3 is a store room of processed fish (-2°C)
4. Coolroom 4 is the bulk bin chiller (-2°C)
5. Coolroom 5 is for ice manufacture (-2°C)
6. Coolroom 6 is to be used as an ice storage room

Coolrooms 1, 2, 5 and 6 will have subfloor heating / insulation

Water Monitoring

All water used on the premises in connection with its use in ingredients, processing or cleaning, is potable water which conforms to the required standard in the Export Control (Processed Food) Orders and which contains at least 0.3 ppm of free residual chlorine.

Testing of the chlorine level will be carried out at least once on every production day prior to processing by the QC officer or manager. The results are recorded on Form 03 of the Control Manual.

Aseptic water sampling of processing water will take place monthly by authorised officers of the Department of Health and Human Services laboratory. Samples will be transported to a NATA accredited laboratory within 24 hours. Results will be filed for AQIS inspection. If results are unsatisfactory AQIS will be notified immediately and further sampling will be carried out immediately.
Fig 4. General Process Flow Diagram for Seafood Processing Operations

See Appendix B for specific flow charts of some fish types.
## Project Timetable

<table>
<thead>
<tr>
<th>Activity</th>
<th>30/5/09</th>
<th>26/6/09</th>
<th>24/7/09</th>
<th>22/8/09</th>
<th>20/9/09</th>
<th>29/10/09</th>
</tr>
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<tbody>
<tr>
<td>NOI to Environment Division and Decision of Level of Activity</td>
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<tr>
<td>Planning Application to Council</td>
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<td>EER to Environment Division and Public Advising Period</td>
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<tr>
<td>Assessment and issue of permit</td>
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<tr>
<td>Fit out of Factory with relevant Building Approvals</td>
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<tr>
<td>Commence operation</td>
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</tbody>
</table>

**Table 1 – Proposed Timetable**

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**Environmental Effects Report for Poulos Bros. Fish Processing Plant Brighton, Tasmania, July 2009**
Project Area & Site Plan

Figure 5 Area Plan - Bridgewater Bridge & Derwent River

Figure 6 Location Plan
The proposed plant will be located just south of the proposed new transport Hub for Hobart which includes the Brighton Bypass road which will bypass Brighton and Bagdad to the east. The location is marked in the above Site Location map.

Current Occupier

The current occupier of the building is a business that does construction of relocatable homes and known as Eco-Duro. They have a one year lease and the building is only one year old. There is substantial existing truck and crane movement into and out of the premises.

The land title for the new owners – Australian Fishing Industries Pty Ltd will be issued prior to 31 July 2009.

There are no Public Buildings within the vicinity of the premises and the nearest dwelling is 500m away.

**Statutory Approvals**

Poulos Bros Seafoods Pty Ltd currently operates under an Australian Quarantine Inspection Services rating of “A” Establishment and intends to continue this top rating standard of processing. It has the following approvals at its Hobart operations:

**Table 2 – List of Statutory Approvals held by Poulos Bros.**

<table>
<thead>
<tr>
<th>LEGISLATION</th>
<th>PERMIT</th>
<th>JURISDICTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Export Control Act 1982</strong></td>
<td>Certificate of Registration of an Export Registered Establishment</td>
<td>Australian Quarantine Inspection Service of Department of Agriculture Fisheries and Forestry</td>
</tr>
<tr>
<td><strong>Environmental Management &amp; Pollution Control Act 1994</strong></td>
<td>Environment Protection Notice 7131/1 November 2005</td>
<td>Department of Tourism Arts and the Environment</td>
</tr>
<tr>
<td><strong>Fisheries Management Act 1991</strong></td>
<td>Fish Receiver Permit</td>
<td>Australian Fisheries Management Authority</td>
</tr>
<tr>
<td><strong>Food Act 2003</strong></td>
<td>Food Business License FD1419</td>
<td>Hobart City Council</td>
</tr>
<tr>
<td><strong>Living Marine Resources Management Act 1995</strong></td>
<td>Fish Processing Licence</td>
<td>Department of Primary Industries and Water</td>
</tr>
<tr>
<td><strong>Dangerous Goods Act 1998</strong></td>
<td>Dangerous Goods Licence</td>
<td>Department of Justice</td>
</tr>
</tbody>
</table>

Most of these approvals need to be transferred to the new operator - Poulos Bros at Greenpoint Rd, Brighton. Copies of the existing approvals are in Appendix A.
PART C POTENTIAL ENVIRONMENTAL EFFECTS

This section describes how the operation is to be managed and operated so as to meet satisfactory environmental performance standards.

Poulos Bros Pty Ltd is committed to meeting and exceeding all contemporary environmental standards. It will meet all environmental approvals including obtaining a level 2 permit for the operations.

The EER is structured by first listing the potential environmental impacts for each aspect as outlined in the Guidelines and then evaluating the impacts and providing measures to mitigate the impacts.

1. Flora and Fauna

The new factory is already built and is located on grassland behind the old sale yards (see Figure 7 below). The factory is already built and the vegetation community is native grasslands with a blend of exotic species. There is no fauna known on the site.

Figure 7 – Vegetation
2. Rivers, creeks, wetlands & estuaries
The site is 300m east of Ashburton Creek and 2 kms from the Derwent Estuary. As the premises has access to new Council storm water and sewage infrastructure is considered to be no impact on surrounding creeks.

3. Significant Areas
There are no significant reserves within 1 km of the factory.

4. Coastal Zone
The site is over 2 kms from the Derwent Estuary and does not affect any coastal zones.

5. Marine Areas
The site is not in any Marine Areas.

6. Air Emissions (includes odour)
   Air Emissions Potential Environmental Impacts
   The major sources of air emissions are:
   - Odours from existing waste in contracted waste transport vehicles
   - Fugitive odours from the fish on receipt
   - Odours from the waste separator
   - Odours from the solid waste skip bins
   - Any rotten or putrid fish
   - Steam from cooking crayfish

   Air Emissions Impact Evaluation
   The premises are well located to minimise such odours by being situated in an industrial zone and being subject to SW winds from the nearby Derwent Estuary. The most effective way to minimise any odours is to ensure that fish waste is stored in the coolroom and taken off site as soon as is practicable after processing operations. This measure will be carried out. The premises are run on electricity so there are no other air emissions.

   Air Emissions Mitigation Measures
   Any air emissions are to comply with the relevant provisions of the *Tasmanian Air Quality Strategy*. The relevant section in Schedule is that the odour emissions should not exceed 2 odour units at any time at the nearest sensitive receptor. This level is unlikely to cause complaints from people with normal odour sensitivity.

   Poulos Bros will manage any odours so that any nuisance odours will not be detected to any significant degree at places in other ownership. Poulos Bros will detect nuisance odours and

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5 Department of Tourism, Arts and the Environment, 2006; Tasmanian Air Quality Strategy.
will check for fugitive sources on a daily basis. A log of odour checks will be maintained and which is part of the AQIS Approved arrangements.

Greenhouse Gases

With respect to green house gas emissions, the refrigeration units will be new on installation. There are a total of 6 new refrigerant units as follows:

- 2 units for the ice making (one new and one existing)
- 2 units for the store room
- 1 unit for the chiller (Coolroom #1) and blast freezer (Coolroom #2) and
- a unit for the other chiller

Each room will have an evaporator and there will be 6 compressors, 4 for the chillers and freezer and one each for the ice machine and ice store.

Plate 1 – Refrigeration Units

The refrigerant units use the following refrigerant gases.

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>Gases</th>
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<tbody>
<tr>
<td>R22</td>
<td>chlorodifluoromethane</td>
</tr>
<tr>
<td>404A</td>
<td>a mixture of gases including tetrafluoroethane</td>
</tr>
</tbody>
</table>

Table 3 Refrigerant Gases

Gas R22 contains chlorodifluoromethane which is an ozone depletion gas. Unfortunately there is not currently available a gas that can replace it. Gas 404A is a relatively new refrigerant gas and it does not contain any ozone depleting substances. The usage will be 95% R404A. The ice machine (MAJAH) will be the only units using gas R22 and may be converted in the near future. The 4 blast freezers, 2 holding freezers, 2 coolrooms and the small coolroom all use the gas 404A. Therefore the emission of greenhouse gases can be considered to be negligible. There will also be LPG bottles to be used for the crayfish cooker.
The units will be serviced by Peter Kurowski of Kurowski & McLennan Refrigeration & Electrical

7. Wastewater Management

Wastewater Potential Environmental Impacts
The most significant potential environmental impact is if fish processing wastewater, particularly the oil waste from orange roughie were to seep into the stormwater system.

Wastewater Impacts Evaluation
Figure 9 shows the floor drainage system for the collection of wastewater at the factory.

The wastewater collection system has been based on many years experience in fish processing. Essentially the system is based on a waste minimization approach where floor waste is collected by a dry clean up with broom prior to any hosing down of the floors.

In the factory there will be drainage catchpoints in the following areas (See Fig 9 and Fig 3 for room names)
- processing room / coolroom,
- main processing room (3 drains)
- bulk bins holding room
- bin tipper room, and
- 3 drains in the main warehouse

The drains will have a double stainless steel mesh with openings of approximately 5 mm. Following this initial floor waste dry clean up, the floors will be thoroughly cleaned by hosing (Plate 2). As the factory has an existing concrete floor the drainage therefore the proposed drainage system will be installed by way of an elevated subfloor as follows

→ Floor heating mesh over exiting concrete floor with any drainage pipes
→ 50mm of concrete slurry
→ Vaporised plastic layer
→ 150mm insulation
→ 150mm concrete covered to walls

Wastewater will also receive a number of collection points taking hand washbasins.

There will be a 3000-litre separation tank installed as an allowance if any bulky fish is processed and there is a need to hold the solids for pumping out. Solids will be removed within 48 hours. The wastewater drains to Council’s sewage system at the Brighton presumably under a permit to discharge trade waste to sewer to be obtained from Southern Water.
Wastewater Mitigation Measures

It is proposed that as far as practicable all solid matter shall be removed from the floors by sweeping prior to the floors being thoroughly hosed into the drainage system.

At Poulos Bros Pty Ltd, the discharge of solid matter and pollutants in liquid waste shall be prevented by all practical means including:

- good housekeeping, provision of adequate containers to avoid loss to the floor,
- the control of spillages by sweeping, brooming, shovelling, vacuum cleaning, impoundment and
- pumping out of sludgy wastes from the separation tank if necessary (capacity 3,000 litres) which will be on the sewer line.

To achieve this end Poulos Bros Pty Ltd shall have comprehensive operating instructions and thorough training and supervision of employees and contractors on site. Cleaning schedules will be conducted in accordance with the Hygiene Cleaning program outlined below.

Poulos Bros. will apply for a Trade Waste Agreement to Southern Water if necessary after the Development Proposal has been approved.

Stormwater will discharge to the Council storm water system. In accordance with Poulos Bros Pty Ltd. commitment to a sustainable development, stormwater tanks will be installed at the rear of the premises for collection of rainwater for subsequent reuse.

All process water will be chlorinated and readings taken at least twice daily by the Production Manager. The readings will be recorded on the Daily Hygiene Report. A level between 0.5 ppm and 2 ppm will be maintained.

Also it is proposed to install a Bin and Truck wash shed to be located outside of the main factory - see the Figure 10 below.

Plate 2 – Second Stage cleaning by hosing (photo Hobart Fish Port)
Figure 8 Contour Survey Plan
Figure 9: Drainage Plan – Wastewater and Stormwater (note separate sludge tank should be 3K not 2K)
Figure 10 Vehicle Wash Shed
The Food Processing Accreditation Manual of Poulos Bros describes the Hygiene Cleaning program as follows:

**EQUIPMENT, TABLES AND APRONS**
Hosed down and scrubbed with chlorofoam after each production day and rinsed thoroughly with a high-pressure hose.

**FLOORS AND DRAINS**
Cleaned daily after production with a high-pressure hose and Hypochlorite. Steam cleaned at end of each production run.

**WALLS**
Cleaned daily with high-pressure hose after production.
Scrubbed with chlorofoam and rinsed thoroughly with high-pressure hose when soiled.
Steam cleaned at the end of each production run.

**CEILINGS AND LIGHTS**
Scrubbed and cleaned with chlorofoam when soiled.

**LUNCHROOM, TOILETS AND AMENITIES**
Cleaned daily after production with chlorofoam.
Soap dispensers and paper towel dispensers checked daily.

**EDIBLE PRODUCT CONTAINERS AND BINS**
Rinsed, scrubbed with chlorofoam and rinsed thoroughly with high-pressure hose after each production day.

**INEDIBLE PRODUCT CONTAINERS (Black)**
Rinsed, scrubbed with chlorofoam and rinsed thoroughly with high-pressure hose daily after each production day.

**CHILLER**
Scrubbed and cleaned with high-pressure hose and chlorofoam when empty, at least once per week. Cleaned daily with high-pressure water in vacant areas.

**TRANSPORT BINS**
Cleaned with high-pressure water immediately after emptying.
Scrubbed when Soiled.

**EXTERIOR**
Concrete hosed with high-pressure water immediately after receipt of product and at the end of each production day. Exterior grounds and building maintained on a regular basis as required.
8. Solid Waste Management

Solid Waste Potential Environmental Impacts
Discharge of solid matter and pollutants in liquid waste is and will continue to be prevented by all practical means as in:

- good housekeeping,
- provision of adequate containers to avoid loss to the floor,
- the control of spillages by sweeping, brooming, shoveling, vacuum cleaning,
- impoundment and pumping out of liquid wastes and trapping into separation tank (capacity 3000 litres) which is on site.

Solid wastes are generated throughout the process of fish manufacturing at the following sources:
- fish heads, and gut from the filleting line
- fish skins from the skinning line or
- putrid or rotten fish
- miscellaneous packaging, domestic and commercial waste

Solid Waste Impacts Evaluation
All solid wastes apart from fish waste are stored in separate trays and deposited to a skip bin for daily removal.

All solid wastes handled within the premises shall be contained as far as practicable to prevent spillage. All wastes stored at the premises shall be held in a leak proof container, which shall be fitted with a weather proof and animal resistant cover. The cover shall be used at all times when waste is held in the container. These containers will be clearly marked “waste product only”.

All solid waste (removed for a fee) will be removed from the premises only by contractors with a current Waste Transport Business Environment Protection Notice licence. It is proposed for Veolia to continue to take solid waste, as is currently done at the Hobart Port, to Triabunna fish meal plant for processing.

Solid Waste Mitigation Measures
All solid waste (removed for a fee) will be removed to a refuse disposal site or rendering plant licensed and approved in accordance with the EMPCA. All solid waste is intended to be stored in separate containers in a coolroom and removed from premises within 48 hours. It is proposed for Veolia to take solid waste to Triabunna fish meal plant for processing.
9. Noise

Noise Potential Environmental Impacts
Noise from the proposed operations is not considered to be a factor to alter the existing ambient noise levels. The main source of noise from the proposed fish processing plant is the refrigeration units used to run the cool rooms. The surrounding areas are not tranquil and have noise levels commensurate with a light industrial area and major highway.

The transport noise is generated from pan techs and other heavy vehicles associated with general industrial activities. There are also many large trucks that use the Midland Highway.

Noise Impact Evaluation
Noise emissions from the existing premises have not been an issue due to the fact that the premises are in a light industrial zone.

The impacts of noise are further evaluation in the next section – Transport Impacts.

10. Transport Impacts

A Traffic Impact Assessment (TIA) was carried out by Midson Traffic Pty Ltd in May 2009. The full report is in Appendix C.

The TIA examined the traffic impacts associated with the proposed development including the following:

- Review of the existing road environment in the vicinity of the site and the traffic conditions on that road network;
- Provides information on the proposed development with regards to traffic movements;
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity; and
- Examines the traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.

The access to the site is shown in the diagram below.
The TIA was conducted following a review of available traffic data and information, standard codes and guidelines, and other supplementary traffic data and information.

Midson Traffic Pty Ltd advises with respect to traffic generation the following:

**The traffic generation potential of the proposed development has been based on approximations provided by Poulos Seafoods. The following approximations are based on the existing operation at Macquarie Wharf:**

- **Couriers** – approximately 1 vehicle per day
- **Polybox deliveries** – 3 trucks / week (=1 vehicle / day)
- **Fish transport** – 3 to 6 trucks / week (=1 vehicle / day)
- **Staff** – 30 vehicles / day (maximum based on 25 – 30 staff)

Therefore the typical traffic generation rates applicable to the proposed development are likely to be an average daily generation of 33 vehicles per day. This includes approximately 3 trucks per day.

With respect to parking the Midson Traffic Assessment reports:

**The proposed development would fall under “Factory” in the Brighton Planning Scheme, 2000. The parking requirements for this use are:**

- 1 space per 50m$^3$ of Gross Floor Area (GFA), or
- 2 spaces per employees, whichever is greater
In this case, the GFA is approximately 1,500m$^2$, and staff numbers are up to 30 per day.

The parking requirements under the Planning Scheme are:
- 30 spaces based on GFA, or
- 20 spaces based on staff numbers.

Therefore the proposed development requires a total of 30 spaces according to the Planning Scheme.

The key findings of the report are as follows:
- The traffic generated by the proposed development will not have any significant adverse impacts on transport efficiency or road safety;
- The sight distances at the access point to the site are adequate in both directions;
- The existing junction of Crooked Billet Drive / Midland Highway is currently operating at an acceptable level; and
- The parking area provided on site will be sufficient in catering for all staff and freight. Subject to the recommendations above, the proposed development is supported on traffic grounds.

The report recommended that the following measures be undertaken to support the proposed development:
- The gravel car parking and loading area be sealed, as well as the driveway to Greenbanks Drive.
- Staffs parking areas are to be clearly defined near the perimeter of the site.

Poulos Bros are committed to implementing all these recommendations.
11. Other Off Site Impacts
There are not considered to be any other impacts apart from those listed herein. The nearest dwelling is over 500m away.

12. Dangerous Goods and Chemicals

Hazardous Waste Potential Environmental Impacts

Chemical Storage

The chemicals proposed to be stored on site include ezychlor (Sodium Hypochlorite) for sterilizing the premises. It will be stored separately and handled under strict supervision of the Quality Control Officer. The quantity to be stored is 5 containers each of 25 litres.

Other chemicals used include:

- Refrigerant gases including a mixture of gases such as chlorodifluoromethane and tetrafluoroethane
- Senola – disinfectant / detergent solution (25 litres)
- Hygenex all clean food industry hand cleaner and antiseptic hand wash (12 packs each of 250 grams)

All chemicals will be suitably labelled with warning of toxicity, and directions for use in the premises. Generators will operate the coolrooms and there is some storage of petrochemical oils for maintenance.

Hazardous Waste Impact Evaluation
There will be very small quantities of hazardous wastes and there are considered to be very minor environmental issue for this activity.

Hazardous Waste Mitigation Measures
All chemicals are suitably labelled with warning of toxicity, and directions for use in the premises. None of the hazardous materials stored on site requires a Dangerous Goods Licence. Generators operate the coolrooms and there is some storage of petrochemical oils for maintenance.

All chemicals, pesticides and poisons will be stored separately and handled under strict supervision of QC Officer/Manager. All chemicals are to be suitably labelled with warnings of toxicity, and directions for use in premises.

The Manager is responsible for all cleaning programs and trains new personnel on correct cleaning procedures before commencing work.

Any bunding requirements shall be in accordance with the Dangerous Goods Regulations 1998 (Part 7, Section 44), AS 1940 (1993), and AS 3780 (1994). No
Dangerous Goods licences are required. As a minimum, all bunding should be impervious to the materials stored in the bunds and be able to contain at least 110% of the volume of the largest vessel stored in the bund.

If there is a release of any hazardous material then the Manager will advise both the EPA Director of Environmental Management and the Brighton Council. Containment and bunding in accordance with the Material Safety Data Sheets will be followed so as to prevent any adverse impacts to the community surrounding the plant.

The current operation at Poulos Bros Hobart has a fire safety plan. A similar Safety Plan will be adopted for the Brighton plant.

13. Site Contamination
The site was previously apparently part of the old sale yards and has no know previous site contamination history.

14. Cultural & Aboriginal Heritage
The site has no known cultural or aboriginal heritage values and the land is not listed on the any heritage register.

15. Sites of High Public Interest
There are no sites of any high public interest. The premises are located in a light industrial zone.

16. Rehabilitation
The plant and equipment at the premises will be all new. The processing facilities are all stainless steel and the drainage system will be retrofitted into the existing factory.

When and if the premises closes or the lease is revoked, all portable equipment will be removed and the shed will be reinstated as an open shed depending on future use.

The existing premises at Macquarie Wharf will be decommissioned and the coolrooms dismantled and sold off. Some equipment will be reused such as a conveyor

17. Council Information Requirements
The premises are in the Bridgewater Light Industrial zone and connected to both a reticulated sewer system and a reticulated water and storm water system (see part 7 liquid effluent for details). It is proposed to employ up to 30 staff consisting of 4 permanent staff, and 26 casual staff with a maximum of 20 at any one time 3 days per week all year around. The premises will operate up to 7 days per week with normal operation hours 6am to 7 pm
18. External Risks

Poulos Bros Pty Ltd has an Emergency Plan for its Hobart premises. It is intended to rework this plan for the Brighton operations.

The table below lists the likely emergency events and the mitigation measures to deal with such emergencies.

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>MITIGATION STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power failure</td>
<td>Stop processing, store all fish into coolrooms and DO NOT OPEN COOLROOMS until power returns, on resumption of power monitor fish in accordance with food Safety Standards</td>
</tr>
<tr>
<td>Public safety of premises</td>
<td>Gate has a guard and is shut when not in use</td>
</tr>
</tbody>
</table>

Table 4 – List of Potential External Risks

19. Public Health

The main public health issues are addressed under the following subheadings:

FLY CONTROL
If a problem with flies is discovered during a pre operation inspection a fogging knock down fly spray “Settling Day” will be used before production commences. A complete wash down after fogging would be employed. The same format would be employed if during production a fly problem existed. A complete clearance of product and the above format will be implemented.

VERMIN CONTROL
Bait stations will be highlighted in yellow on an internal premises plan. Bait stations to be clearly labelled “POISON” and are checked weekly by the Manager/QC Officer and recorded on the Hygiene and Premises Report (Form No. 03 of the Fish Processing Accreditation Manual). Poulos Bros Pty Ltd. engage Rent –A-Kill to bait the premises once per month and report and check all the base stations.

COMMUNICABLE DISEASES
Poulos Bros Pty Ltd has adopted the following procedure with respect to communicable diseases:

No Person, while known or suspected to be suffering from, or to be a carrier of a disease likely to be transmitted through processed food or while affected with infected wounds, skin infections, sores or diarrhoea, is permitted to work in any food
handling area in the capacity in which there is a likelihood of such a person directly
or indirectly contaminating food with pathogenic micro-organisms.

Any person so affected must immediately report their illness to management.

INJURIES
Any person who has a cut or wound must not continue to handle processed food or food
contact surfaces until the injury is completely protected by a water proof covering which is
firmly secured, and which is conspicuous in colour.

PERSONAL CLEANLINESS
A person in a food handling area must maintain a high degree of personal cleanliness. A
person must not wear any jewellery when engaged in preparing processed food except sleeper
earrings and plain wedding rings.

A person must not wear fingernail varnish if handling food with bare hands.

A person must not engage in any behaviour which could result in contamination of processed
food, such as eating, smoking, chewing anything such as gum, sticks, tobacco or betel nuts, or
any other unhygienic behaviour in food handling areas.

A person who will be engaged in handling food must wash his or her hands at the following
times:
☐ on entering the food handling are;
☐ immediately after using the toilet;
☐ after touching the nose or mouth;
☐ after handling contaminated material; and
☐ Whenever necessary to avoid contaminating the food in the area

A person who will be engaged in handling food must wash and disinfect his or her hands immediately after handling any material, which might be capable of transmitting disease.

PROTECTIVE CLOTHING
A person in a food handling area must at all times:
(a) wear suitable protective clothing and footwear; and
(b) wear a head-covering that encloses the hair; and
(c) if medium or high risk food is prepared in the area and the person has a beard or
moustache, or both wear a head covering that encloses the scalp hair, and the beard or
moustache, or both; and
(d) if the person is wearing gloves – ensure that the gloves are in a sound, clean and
sanitary condition

If a person wears disposable gloves or other disposable protective clothing in a food handling
area, the gloves or other clothing must be discarded after use and must not be reused.

Protective clothing worn by a person in a food handling area must not have an outer breast
pocket and must be light coloured; and either washable or disposable
A person in a food handling area must keep protective clothing clean so as not to present a risk of contamination to the processed food.

Protective outer clothing (including footwear, overalls, aprons, headwear and gloves) used in a food handling area must not be worn outside the establishment.

New and existing personnel are informed of the above hygiene requirements. All personnel are supervised and trained by the Manager/QC Officer.

20. Sustainability
Poulos Bros are committed to ensuring the operations meet sustainability principals as much as possible. They will incorporate several key environmental initiatives including and not limited to:

- Construction of a sealed car park with storm water collection points
- Installation of rain water tanks (two @ 20,000L) to supplement water usage
- Installation of their own ice making facility and appropriate disinfection procedures
- Compliance with full AQIS requirements for export of their product
- Installation of a Heat Exchanger Economiser to transfer heat from refrigeration units to assist with heating hot water.
- Pre treatment of wastewater prior to discharge to sewer and in place any relevant Trade Waste Agreements
- Landscaping and bordering with native plants and trees and

21. Monitoring & Review
Monitoring is to be conducted in two parts – quarantine and environmental.

As part of the quarantine requirements there will be a comprehensive program of monitoring for the following aspects of the operations:

- ice water
- chlorination
- sanitation

Ice is to be manufactured from potable standard water, which conforms to Export Control (Processed Food) Orders – Schedule 2, 24.1. The water is to be sampled not less than monthly during periods of operation, or more frequently if required. Samples
are to be analysed at a NATA registered laboratory and records are to be retained on the premises. AQIS regional office to be notified in writing by Fax within 2 working days of receipt of the results of examination of any sample of water / ice if it does not comply with the following

- any *E. coli* per 100 ml
- more than 10 coliform organisations per 100 ml
- any two consecutive samples containing 1 to 10 coliforms per 100 ml
- any three samples containing 1 to 10 coliforms per 100 ml in any consecutive 12 month period

There is to be a chlorination program for processing water. All process water will be chlorinated and readings taken at least twice daily by the Production Manager. The readings are recorded on the Daily Hygiene Report. A level between 0.5 ppm and 2 ppm is maintained.

Poulos Bros Pty Ltd is to have a *Listeria* sampling and testing program. Listeria analysis results are to be kept on the premises and are to be available for inspection by authorised AQIS personnel. Testing will be performed by a NATA registered laboratory.

Environmental monitoring will occur with respect to:

- wastewater quality and quantity
- odour audits
- solid waste generation

Wastewater monitoring for quality and quantity will occur as part of any Trade Waste agreement with Southern Water. Samples is expected to be collected randomly at 6 monthly intervals and analysed at a NATA registered lab. Compliance with water quality objectives of the sewage discharge is expected to be met. Parameters to be analysed will be:

- pH
- temperature
- Chemical Oxygen Demand
- Biological Oxygen Demand
- Total Suspended Solids
- Floatable Oils and Grease
- Rate of Discharge

Odour audits (see section 3.2) are also proposed to be undertaken if there are any odour complaints.

Poulos Bros Pty Ltd. will review the Environmental Management Plan at an interval of between 3 and 5 years. Reviews should include a comparison of the actual operation versus any predictions with respect to solid waste, noise, odours, trade waste and hygiene made in this document.
22. Responsibilities
Poulos Bros Pty Ltd. has developed an Induction Book for all staff. The standards of Personal hygiene are outlined below.

Dress Code
It is a requirement that clean factory issue overalls or coats be worn in the processing areas at all times. These overalls or coats must be clean and kept in a hygienic condition. Street clothing is not allowed into processing areas. Overalls, dustcoats etc must be removed before leaving the premises for the day. Items taken home for washing must not be worn home. Anyone entering a processing area must wear clean approved gumboots. These can either be gumboots for process workers or leather ankle boots or approved shoes for other staff. No other footwear is acceptable. Gumboots worn outside the factory must only be worn in transit between the factor and amenities block. They must not be worn home e.g. off concreted areas.
All personnel entering a processing area must wear factory issue hat. These hats are either bump hats or soft cloth hats for process workers. All loose hair should be tucked into the hat. In addition all beards and moustaches must be covered.
All hair clips or grips or hair bands must be contained inside the hat, or else removed from the hair.
Used gloves must be disposed of correctly in the bins provided

Entering processing areas
All boots and gumboots must be sanitised by walking through the footbath positioned in the main entrance to the processing area.
All personnel must wash their hands upon entering and leaving the processing area.
Hands must be washed after going to the toilet - every time.

Street clothing
Jackets, jumpers and all other street clothing are not allowed to be worn over overalls in processing areas.
The top layer of clothing worn in processing areas must be dust/laboratory coat, and warm clothing or jackets should be under these overalls.
No jackets or jumpers are to be left in the processing area. They should be kept in the lockers provided in the amenities.

Smoking
Smoking is strictly forbidden in all processing areas, lunchroom, and fish receivable areas.

Eating
Eating food, including soft drink, and chewing of gum in the processing areas is strictly forbidden.

First aid dressings
It is important that all cuts and sores are covered with an approved dressing and the dressing
be covered with a fingerstall or waterproof glove if on the hands, and a sleeve cuff if on the arms. These can be obtained from the first aid room as appropriate.

If any dressing should get lost during production, then the supervisor should be informed immediately so it can be retrieved.

**Sleeves on clothing**
All personnel handling fish must either roll up their sleeves to above the elbow or wear protective sleeve cuffs.

**Watches**
No watches of any sort are to be worn in the processing areas.

**Jewellery**
Because of the serious risk of contamination of product, the wearing of jewellery in processing areas is prohibited. The only exceptions to this are plain wedding bands. However if a wedding band contains stones of any sort, then a glove must cover it. Bracelets, brooches, bangles, chains, earrings, nose studs etc., are not permitted.

**Nail polish**
Because nail polish can chip off and some has been found in product which has caused customer complaints, the wearing of nail polish is forbidden, except when covered by a glove, at all times.

**Wearing of aprons**
All process workers are required to wear approved aprons as issued and should be kept clean at all times and always tied back. Personal issued aprons should be used at all times, no on else's.

**Sickness**
Anyone showing symptoms of diarrhoea or vomiting must advise their supervisor or management immediately and go to the doctor for treatment.

Under no circumstances must anyone work in processing areas when they have the above symptoms, as we risk contaminating product.

**Drivers**
Truck drivers and forklift operators are to obey all safety requirements and to make sure their vehicle is cleaned inside and out at end of use

**General**
All rubbish to be placed in containers provided.
Anyone who works on processing lines must report to supervisor immediately any item is found to be missing and which may have fallen into product. i.e. contact lenses, parts of spectacles, false teeth etc. We must do everything we can to avoid product contamination
PART D - ENVIRONMENTAL MANAGEMENT COMMITMENTS

This section documents environmental commitments outlined in the EER. It is proposed that they form the basis of the environmental conditions for the licence. Activities are to be conducted in accordance with the requirements of EMPCA and the Regulations thereunder and in accordance with the requirements of any relevant State Policies. These commitments must not be construed as an exemption from any of those requirements.

General Conditions

1) The total annual amount of products produced per annum shall be an upper limit of 10,000 tonnes per annum.

2) A copy of this EER, permit conditions and any associated documents referred to in the conditions will be held in a location, which is known and accessible to the responsible person(s).

3) If there is an incident such as a spill of waste or chemicals, Poulos Bros will take every effort to minimise the emission of a pollutant and the threat of serious or material environmental harm. Poulos Bros also undertake to advise the appropriate authorities such as the EPA, Southern Water and the Brighton Council of such an incident.

Wastewater Management

4) It is proposed that as far as practicable all solid matter shall be removed from the floors by sweeping prior to the floors being thoroughly hosed into the drainage system. The discharge of solid matter and pollutants in liquid waste shall be prevented by all practical means including:
   • good housekeeping, provision of adequate containers to avoid loss to the floor,
   • the control of spillages by sweeping, brooming, shovelling, vacuum cleaning, impoundment and pumping out of sludgy wastes from the separation tank if necessary (capacity 3,000 litres) which will be on the sewer line.

5) Any oil from orange roughie processing will be collected in the 3000L solids collection tank and removed within 7 days when processing such materials or monthly at other times. All other wastewater will discharge to the Southern Water sewage system.

6) Poulos Bros. will apply if necessary for a Trade Waste Agreement to the Southern Water after the Development Proposal has been approved. Wastewater monitoring for quality and quantity will occur as part of a Trade Waste agreement with Southern Water.

7) All process water will be chlorinated and readings taken at least twice daily by the Production Manager. The readings will be recorded on the Daily Hygiene Report.
level between 0.5 ppm and 2 ppm will be maintained.

Stormwater Management

8) Stormwater from the roof will discharge to two 20,000 L tanks. The water will be used to supplement mains water for washdown and garden use only. Excessive storm water will discharge to the existing storm water system.

Solid Waste Management

9) All solid waste matter shall be removed from both the processing floors and the car park. All wash down water from the processing floors will discharge to the sewer system. Storm water from the car park will discharge to storm water system after pretreatment in a triple inceptor trap. To achieve this end Poulos Bros. shall have comprehensive operating instructions and thorough training and supervision of employees and contractors on site.

10) All solid wastes handled within the premises shall be contained as far as practicable to prevent spillage. All wastes stored at the premises shall be held in leak proof containers, which shall be fitted with a weather proof and animal resistant cover. The cover shall be used at all times when waste is held in the container. These containers will be clearly marked “waste product only”.

11) All solid waste (removed for a fee) will be removed from the premises only by contractors with a current Waste Transport Business Environment Protection Notice licence.

12) All solid waste (removed for a fee) will be removed to a refuse disposal site or rendering plant licensed and approved in accordance with the Act. It is intended that all solid waste will be removed from premises within 48 hours.

Hazardous Waste Management

13) All chemicals, pesticides and poisons will be stored separately and handled under strict supervision of QC Officer/Manager. All chemicals will be suitably labelled with warnings of toxicity, and directions for use in premises.

14) Any bunding requirements will be in accordance with the Dangerous Goods Regulations 1998 (Part 7, Section 44), AS 1940 (1993), and AS 3780 (1994).

15) If there is a release of any hazardous material then the Manager will advise both the EPA and the Brighton Council. Containment in accordance with the Material Safety Data Sheets will be followed so as to prevent any adverse impacts to the community surrounding the plant.

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6 It is proposed to have fish waste sent to an existing fish meal plant.
16) Poulos Bros will manage any odours so that any nuisance odours will not be detected to any significant degree at places in other ownership. Poulos Bros will detect nuisance odours and will check for fugitive sources on a daily basis. A log of odour checks will be maintained and which is part of the AQIS Approved arrangements.

17) Odour audits are proposed to be undertaken if there are any odour complaints.

Monitoring

18) Wastewater monitoring for quality and quantity will occur as part of any Trade Waste agreement with Southern Water. Samples is expected to be collected randomly at 6 monthly intervals and analysed at a NATA registered lab. Compliance with water quality objectives of the sewage discharge is expected to be met. Parameters to be analysed will be:

- pH
- temperature
- Chemical Oxygen Demand
- Biological Oxygen Demand
- Total Suspended Solids
- Floatable Oils and Grease
- Rate of Discharge
PART E CONSULTATION PROCESS

Poulos Bros have contacted all surrounding neighbours. The nearest neighbour has an existing operation and has been contacted about the proposed fish processing plant and it is understood they have no objection to the proposal.

Boral Quarries are required to be contacted as the proposal falls within the Bridgewater Quarry Overlay and the Environmental Buffer Overlay of the Brighton Planning Scheme 2000.7

Meetings have already been held with both the Brighton Council and the Environment Division as follows:

- Meeting with James Dryburgh (Planner) and Jemma Farmer (Student Planner) on 21 April 2009 at the Brighton Council officers
- Meeting with Dr Sarah Richards (Environmental Scientist) from the Environment Division on 5 May 2009 at the Hobart Fish Port
- Inspection of proposed new premises by Senior EPA officers and discussions with Daryl Cook by Jamie Wood

Following review of e NOI, the EPA deemed the project to be a Level 2A project and hence be subject the preparation of an Environmental Effects Report with a consultation period of up to 14 day as determined by Environment Protection Authority Board.

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7 The Bridgewater Quarry Overlay of the Brighton Planning Scheme requires applicants to have their proposal referred by Council to the quarry operator; such referrals have 14 days for a response and Council must consider the compatibility of the proposes use, the distance of the proposal, the attenuation distance and AS 1055 with respect to noise and air emissions.
5. REFERENCES

AS/NZS 2107:2000; Recommended Design Sound levels and Reverberation times for interiors

Environment Protection Authority, 2009; Environmental *Effects Guidelines for the Relocation of fish processing facility for Greenbanks Rd Bridgewater for Poulos Bros. Pty Ltd*

Department of Tourism Arts & the Environment, 2006; Tasmanian Air Quality Strategy

Hobart Fish Handling Centre, 2003; *Food Processing Accreditation Manual.*
Appendix A - Relevant Statutory Approvals
Export Licence

Environmental Effects Report for Poulos Bros. Fish Processing Plant Brighton, Tasmania, July 2009
TASMANIA
Living Marine Resources Management Act 1995

FISH PROCESSING LICENCE

POULOS BROS. SEAFOODS PTY LTD
HOBART FISH PORT
GPO BOX 305
HOBART

TAS 7001

Certificate: T127605
Client Id: 3602
Page: 1 of 2
Transaction Id: 279609
Transaction Date: 31/07/2008 11:52:53
Description: Renew licence(s)

Licence Holder

Nominated natural person: MR CONSTANTINE POULOS
Supervisor: MR CONSTANTINE POULOS
Supervisor: MS SALLY BOWERMAN
Supervisor: MS DENISE MCGUINNESS

Licence(s) valid from 1 September 2008 until 31 August 2009

Fish Processing Licence - Entitlement number 112
Valid from 1 September 2008 until 31 August 2009

Processing Place: HOBART FISH PORT MACQUARIE WHARF NO.1, HUNTER STREET
HOBART TAS 7000

Supervisor: Ms Denise McGuinness
Supervisor: Ms Sally Bowerman
Supervisor: Mr Constantin Poulos

Authorised Wild Species: Finfish, Shellfish, Rock Lobster, Shark, Skate, Sea Urchins, Periwinkles, Scallops, Jack Mackerel, Giant Crab

Authorised Marine Farmed Species: Trout, Oysters, On-Grown Wild Pacific, Mussels, Salmon

All wild Pacific oysters processed with a shell length less than 110mm are only to be sold as meats only form or meat in the half shell. All shipments of wild Pacific oysters must be labelled so as to show the licence number on which the wild Pacific oysters were held immediately prior to sale for processing.

The holder of this fish processing licence is authorised to process rock lobster to an amount up to and in excess of 5 tonnes during the licensing period or part thereof for which this licence is valid.

The holder of this fish processing licence is authorised to process scallops during the licensing period or part thereof for which this licence is valid.

INFORMATION

This licence is subject to the conditions specified on this licence.

You should read the Conditions and you must have the nominated natural person (if applicable) and any and all supervisors read this licence and the Schedule of Conditions.

You must display a copy of this licence at each Processing Place and/or Storage Place listed on this certificate.

Fish Processing Licence

Environmental Effects Report for Poulos Bros. Fish Processing Plant Brighton, Tasmania, July 2009
Fish Receiver Permit

Fisheries Management Act 1991

Fish Receiver Permit Holder

POULOS BROS SEAFOODS P/L
GPO BOX 306
HOBART TAS 7001

Start Date
1 Jun 2008

Expiry Date
31 May 2009

Premises Where Fish May Be Received

1. Macquarie Wharf No 1
   Hunter Street
   Hobart TAS 7000
   [Processing Plant, Fish Packer]

2. 

3. 

4. 

Pursuant to section 91 of the Fisheries Management Act 1991,
I, as an authorised officer of the Australian Fisheries Management Authority:

a. grant a Fish Receiver Permit to the holder described above, authorising the receipt of fish from a person engaged in commercial fishing; and

b. state that the Fish Receiver Permit shall have effect for the period specified above and shall be subject to:
   i) the conditions, if any, specified on the reverse of this Fish Receiver Permit and any variations to the conditions as notified in writing to the Permit holder; and
   ii) the conditions specified in subsection 91(4) of the Fisheries Management Act 1991; and
   iii) regulation made pursuant to subsection 92(2) of the Fisheries Management Act 1991.

Mal Heath
For and on behalf of the Australian Fisheries Management Authority (AFMA)

Printed Name
Date
30/05/2008

Fish Receiver Permit

Environmental Effects Report for Poulos Bros. Fish Processing Plant Brighton, Tasmania, July 2009
Food Premises Registration and Licence

Environmental Effects Report for Poulos Bros. Fish Processing Plant Brighton, Tasmania, July 2009
DANGEROUS GOODS ACT 1998

Licence to Keep Dangerous Goods

POULOS BROS SEAFOODS PTY LTD
GPO BOX 306
HOBART 7000

Location of Licensed Premises
HOBART FISH PORT
18 HUNTER STREET
HOBART

This licence is to be displayed in a prominent location at the depot to which this licence applies.

A number of conditions apply with respect to the issue of this licence (see Storage of Dangerous Goods
Information Sheet for Licensees).

A licence is valid only in respect of the person it is issued to, and the storages shown - refer Part 2 Licences
of the Dangerous Goods (General) Regulations 1996. If licence details are incorrect, or ownership of the
licensed depot changes, please refer to the above information sheet or contact the Workplace Standards
Helpline on 1300 366 322.

Penalties apply for breaches of the Act

<table>
<thead>
<tr>
<th>Storage description</th>
<th>Unit</th>
<th>Total Storage</th>
</tr>
</thead>
<tbody>
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<td>KL</td>
<td>1.000</td>
</tr>
<tr>
<td>DISTILLATE</td>
<td>KL</td>
<td>0.200</td>
</tr>
<tr>
<td>LP GAS</td>
<td>KL</td>
<td>1.497</td>
</tr>
<tr>
<td>LP GAS</td>
<td>KL</td>
<td>0.600</td>
</tr>
</tbody>
</table>

Conditions:

CD Daugherty
DELEGATE OF THE COMPETENT AUTHORITY

Dangerous Good Licence
## CHILLED GILLED AND GUTTED FISH

<table>
<thead>
<tr>
<th>STEP No.</th>
<th>Process Symbol</th>
<th>Step Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>Receival of raw material</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Gill and Gut</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>Chill</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>Grade &amp; Pack</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>Weigh and Label</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>Cold Storage awaiting Dispatch</td>
</tr>
<tr>
<td>CRITICAL STEP</td>
<td>POTENTIAL HAZARD</td>
<td>CRITICAL CONTROL POINT (factor)</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>1. Receival of raw material</td>
<td>Receival of unwholesome material</td>
<td>Inspection of fish on receival. Temperature of fish</td>
</tr>
<tr>
<td>3. Chill</td>
<td>Microbial growth. Product temperature above +4 °C</td>
<td>Time / Temperature of product. Ice slurry to be adequate.</td>
</tr>
<tr>
<td>4. Grade and Pack</td>
<td>Incorrect grade.</td>
<td>Accuracy of scales.</td>
</tr>
<tr>
<td>5. Weigh &amp; Label</td>
<td>Incorrect net weight. Incorrect trade description.</td>
<td>Calibration of scales. Marking cartons.</td>
</tr>
<tr>
<td>6. Cold Storage awaiting</td>
<td>Microbial spoilage</td>
<td>Temperature of Chiller.</td>
</tr>
</tbody>
</table>
dispatch Manager / QC Officer and recorded on Form 04. to +4°C storage. Product no dispatched until temperature achieved.

CHILLED SKIN ON / SKINLESS FISH FILLETS

<table>
<thead>
<tr>
<th>STEP No.</th>
<th>Process Symbol</th>
<th>Step Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>Receival of raw material</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Chilled Storage</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>Fillet</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>Skin and Trim</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>Pack and Weigh</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>Label</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>Chill</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>EU Product Sampling (If required)</td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td>Cold Storage awaiting dispatch</td>
</tr>
<tr>
<td>CRITICAL STEP</td>
<td>POTENTIAL HAZARD</td>
<td>CRITICAL CONTROL POINT (factor)</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>1. Receival of Raw Material</td>
<td>Receival of unwholesome material</td>
<td>Inspection of Fish on Receival. Temperature of fish.</td>
</tr>
<tr>
<td>2. Chilled Storage</td>
<td>Fish above required temperature. Microbial growth.</td>
<td>Temperature of chiller. Sufficient Ice.</td>
</tr>
<tr>
<td>3. Fillet</td>
<td>Damaged fish. Unwanted material left on fillet</td>
<td>Filleting operation</td>
</tr>
<tr>
<td>4. Skin &amp; Trim</td>
<td>All skin not removed</td>
<td>Efficient operation of skinning Machine. Trimming.</td>
</tr>
<tr>
<td>5. Pack &amp; Weigh</td>
<td>Net weight less than declared.</td>
<td>Calibration of scales</td>
</tr>
<tr>
<td>6. Label</td>
<td>Incorrect trade description</td>
<td>Labelling</td>
</tr>
<tr>
<td>CRITICAL STEP</td>
<td>POTENTIAL HAZARD</td>
<td>CRITICAL CONTROL POINT (factor)</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>7. Chill.</td>
<td>Microbial Growth.</td>
<td>Temperature of Product.</td>
</tr>
<tr>
<td>8. Finished Product Sampling. <strong>EU Product Testing. Processing Verification Activity.</strong></td>
<td>Micro: Microbial spoilage</td>
<td>Sampling Finished Product from Production.</td>
</tr>
<tr>
<td>9. Cold storage awaiting dispatch.</td>
<td>Microbial growth</td>
<td>Temperature of chiller</td>
</tr>
</tbody>
</table>
PROCESS FLOW CHART
FROZEN / CHILLED HEADED AND GUTTED FISH

<table>
<thead>
<tr>
<th>STEP No.</th>
<th>Process Symbol</th>
<th>Step Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>Receival of raw material</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Chilled Storage</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>Head and Gut</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>Pack</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>Weigh and apply marks</td>
</tr>
<tr>
<td>6a.</td>
<td></td>
<td>Chiller Storage</td>
</tr>
<tr>
<td>6b.</td>
<td></td>
<td>Blast Freeze</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>Cold Storage</td>
</tr>
</tbody>
</table>
## HAZARD ANALYSIS TABLE FOR FROZEN / CHILLED HEADED AND GUTTED FISH

<table>
<thead>
<tr>
<th>CRITICAL STEP</th>
<th>POTENTIAL HAZARD</th>
<th>CRITICAL CONTROL POINT (factor)</th>
<th>MONITORING PROCEDURE</th>
<th>TARGET LEVEL AND TOLERANCES</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Receival of Raw Material</td>
<td>Receiving unwholesome material</td>
<td>Inspection of fish on receival. Temperature of fish.</td>
<td>Inspection of fish by Manager to determine quality and acceptability for processing. Not Recorded.</td>
<td>Fish to be wholesome. Temperature of fish to be between -1°C to +4°C</td>
<td>Manager rejects unwholesome product. If above required temperature reduce to target level prior to processing.</td>
</tr>
<tr>
<td>2. Chilled Storage</td>
<td>Fish above required temperature. Microbial growth</td>
<td>Temperature of chiller. Sufficient ice.</td>
<td>Chiller temperature monitored daily by Manager/QC Officer and recorded on Form 04.</td>
<td>Fish temp to be maintained at -1°C to +4°C</td>
<td>If chiller temperature rises above +4°C notify refrigeration mechanic. Add further ice to maintain temperature.</td>
</tr>
<tr>
<td>4. Pack</td>
<td>Incorrect trade description</td>
<td>Labelling of cartons.</td>
<td>Inspection by Manager / QC Officer for correct trade description. Recorded on Form 02.</td>
<td>Correct trade description according to PGGO's &amp; PFO's including establishment number, name &amp; address of packer, country of origin, and true description of product. Additional country requirements.</td>
<td>Incorrect labelling corrected and resubmitted for further inspection. Labelling checked back to last acceptable inspection and defective labelling rectified.</td>
</tr>
<tr>
<td>5. Weigh and apply marks</td>
<td>Incorrect net weight. Incorrect trade description.</td>
<td>Calibration of scales. Marking cartons.</td>
<td>Daily calibration of scales. Recorded on Form 03. Inspection by Manager / QC Officer. Recorded on Form 02.</td>
<td>Not less than declared net weight. Scales to be accurate. Marks to be complete and accurate including date packed and serial number.</td>
<td>If defective carton found product further inspected back to last acceptable batch. Defective cartons resubmitted for inspection after defect corrected. Use of scales to cease until repaired if found to be inaccurate.</td>
</tr>
<tr>
<td>6a. Chiller storage</td>
<td>Microbial Growth</td>
<td>Temperature of Chiller / Product.</td>
<td>Chiller Temperature monitored daily by Manager / QC Officer and recorded on Form 04. Temperature of product to be between -1°C to +4°C</td>
<td>Temperature of product to be maintained at -1°C to +4°C</td>
<td>If temperature of product rises above +4°C relocate to alternate storage. Product not dispatched until temperature achieved.</td>
</tr>
<tr>
<td>6b. Blast Freezer</td>
<td>Microbial Growth</td>
<td>Time / Temperature of freezing.</td>
<td>Manager / QC Officer to monitor temperature of blast freezer daily. Recorded on Form 04. Product temperature checked on removal of blast and recorded on</td>
<td>Blast freezer temperature to be colder than -30°C. Temperature of product to be colder than -18°C on removal from</td>
<td>If temperature of blast freezer becomes warmer than -25°C notify refrigeration mechanic and if necessary relocate</td>
</tr>
<tr>
<td>STEP No.</td>
<td>Process Symbol</td>
<td>Step Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>-------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td>Receival of raw material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>Chilled Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>Splitting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3a.</td>
<td></td>
<td>Shell Collection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>Washing/Sorting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a.</td>
<td></td>
<td>Roe Removal (If Required)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>Weighing/Grading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>Packing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>Applying marks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>EU Product Sampling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(If required)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td>Chiller / Blast Freeze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>Cold Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRITICAL STEP</td>
<td>POTENTIAL HAZARD</td>
<td>CRITICAL CONTROL POINT (factor)</td>
<td>MONITORING PROCEDURE</td>
<td>TARGET LEVEL AND TOLERANCES</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------</td>
<td>---------------------------------</td>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1. Receival of Scallops</td>
<td>Receival of unwholesome material</td>
<td>Inspection of Scallops</td>
<td>Visual inspection by Manager on arrival. Not recorded.</td>
<td>All Scallops to be in wholesome condition</td>
<td>All unwholesome scallops rejected and disregarded.</td>
</tr>
<tr>
<td>2. Chilled Storage</td>
<td>Rise in temperature resulting in microbial spoilage</td>
<td>Chiller temperature</td>
<td>Chiller temperature monitored daily by Manager/QC Officer and recorded on Form 04</td>
<td>Temperature to be maintained at –1°C to +4°C</td>
<td>If chiller temperature rises above +4°C notify refrigeration mechanic. Relocate to alternate chiller / process immediately</td>
</tr>
<tr>
<td>3. Splitting</td>
<td>Damaged scallops, off condition 3a. Free of contamination</td>
<td>Splitting of Scallops</td>
<td>Operators to check condition of scallops. Random inspection by Manager/QC Officer of splitting.</td>
<td>All scallops to be in wholesome condition. Damaged scallops rejected for export. 3a. Shells to be clean &amp; free of contamination.</td>
<td>All unwholesome scallops are discarded. Damaged scallops used for local market. Shells to be clean.</td>
</tr>
<tr>
<td>5. Weighing / Grading</td>
<td>Incorrect weight / grade. Scales reading accurately.</td>
<td>Weight / Grade operation. Calibration of scales.</td>
<td>Daily calibration of scales by Manager/QC Officer. Recorded on Form 03. Random inspection of accuracy of weights and grades by QC Officer. Recorded on Form 02.</td>
<td>Not less than declared net weight. Grades 20-30 lb, 30-40lb, 40-50lb.</td>
<td>If incorrect weight/grade found batch further inspected back to last acceptable batch and defects corrected and resubmitted for further inspection. Defective scales not to be used until repaired.</td>
</tr>
<tr>
<td>6. Packing</td>
<td>Incorrect trade description</td>
<td>Receival and preparation of packaging</td>
<td>Manager/QC Officer checks incoming stocks of cartons for correct trade description.</td>
<td>Correct trade description according to the PGGO’s and PFO’s including establishment number, name and address, country of origin, true description of product. Additional</td>
<td>Incorrect packaging returned to manufacturer or alternatively used for local market.</td>
</tr>
</tbody>
</table>

Environmental Effects Report for Poulos Bros. Fish Processing Plant Brighton, Tasmania, July 2009
<table>
<thead>
<tr>
<th>CRITICAL STEP</th>
<th>POTENTIAL HAZARD</th>
<th>CRITICAL CONTROL POINT (factor)</th>
<th>MONITORING PROCEDURE</th>
<th>TARGET LEVEL AND TOLERANCES</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Apply marks.</td>
<td>Incorrect labelling</td>
<td>Accuracy of operator applying marks</td>
<td>Random inspection by QC Officer. Recorded on Form 02.</td>
<td>Additional labelling to be accurate/correct including serial number, date packed and count</td>
<td>If incorrect labelling found batch further inspected back to last acceptable batch and marks reapplied on defective cartons and resubmitted for further inspection.</td>
</tr>
<tr>
<td>8. Finished Product Sampling. <strong>EU Product Testing. Processing Verification Activity.</strong></td>
<td>Microbial spoilage</td>
<td>Sampling Finished Product from Production.</td>
<td>QC personnel aseptically sample 1 product line once per month. Samples to be tested at NATA registered lab.</td>
<td>As per Attachment 'Appendix #1&quot;Product Testing&quot;.</td>
<td>Non-conforming product to be rejected for export to EU countries.</td>
</tr>
<tr>
<td>9. Chiller / Blast Freeze.</td>
<td>Microbial growth</td>
<td>Time/temperature of chilling or freezing.</td>
<td>Manager/QC Officer to monitor temperature of blast freezer daily. Recorded on Form 04. Product temp checked on removal from blast and recorded on Form 02.</td>
<td>Blast freezer temp to be colder than –30°C. Temp of product to be colder than –18°C on removal from blast. Chiller temp to be colder than +4°C. Temp of product to be between -1°C to +4°C on removal of Chiller.</td>
<td>If temp of blast freezer becomes warmer than –25°C, notify refrigeration mechanic and if necessary relocate product. If temp of chiller becomes warmer than +4°C, notify refrigeration mechanic and if necessary relocate product.</td>
</tr>
<tr>
<td>10. Cold Storage</td>
<td>Microbial growth</td>
<td>Temp of cold storage. Maintain product at –18°C or below.</td>
<td>Manager/QC Officer to monitor temp of cold storage daily. Recorded on Form 04.</td>
<td>Temp of cold store to operate at –20°C or below. Product to be maintained at –18°C or below.</td>
<td>If temp of cold store becomes warmer than –20°C notify refrigeration mechanic and if necessary relocate product to another cold storage.</td>
</tr>
</tbody>
</table>
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   1.1 Background
   1.2 Study Area
   1.3 Existing Site
   1.4 Proposed Development

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   2.2 Traffic Volumes
   2.3 Road Safety Performance
   2.4 Intersection Assessment
   2.5 Access Conditions
   2.6 Specific Users of the Transport Network

3. Traffic Impacts
   3.1 Traffic Generation
   3.2 Access Impacts
   3.3 Road Safety Impacts

4. Parking Assessment
   4.1 Parking Provision
   4.2 Planning Scheme Requirements
   4.3 Operational Parking Requirements

5. Conclusions

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Table 2   PM Peak Traffic Data

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1. Introduction

1.1 Background

Midson Traffic Pty Ltd were engaged by Poulos Bros. Seafoods Pty Ltd to prepare a Traffic Impact Assessment (TIA) for the proposed relocation of their operations to 19 Greenbanks Road, Bridgewater. Poulos Seafoods are currently located at Macquarie Wharf, and operations are expected to remain essentially similar with the exception of no deliveries being made via fishing boats.

This TIA forms part of a Level 2 Environmental Assessment. It examines the traffic impacts associated with the proposed development including the following:

- Review of the existing road environment in the vicinity of the site and the traffic conditions on that road network;
- Provides information on the proposed development with regards to traffic movements;
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity; and
- Examines the traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.

1.2 Study Area

The subject site covers an area of approximately 5,400m² and is located off Greenbanks Road, within the Brighton Municipality.

The subject site and surrounding road network is shown in Figure 1.
1.3 Existing Site

The existing site consists of an open gravel area, a large warehouse shed, and other associated sheds. The existing site is shown in Figure 2.
1.4 Proposed Development

The proposed development will comprise the following:

- Internal modifications to existing shed;
- Fish processing; and
- Storage and transfer of processed fish products.
2. Existing Conditions

2.1 Transport Network

2.1.1 Midland Highway

The Midland Highway is a Federally owned road, currently classified as a Category 1, Trunk Road, under the DIER publication, *Tasmanian Road Hierarchy*, 2007. Trunk Roads provide the primary freight and passenger vehicle movement within the regions of Tasmania.

The Midland Highway carries approximately 13,200 vehicles per day (according to DIER State Road Traffic volumes, 2003) near the subject site. The Highway is approximately 9 metres in width, with narrow gravel shoulders and well defined centre and edge line markings near the subject site. The posted speed limit is 80-km/h for both approaches in the vicinity of the site.

Midland Highway looking west and east from its intersection with Crooked Billet Drive is shown in Figure 3 and Figure 4 respectively.

Figure 3 Looking north along Midland Highway
2.1.2 Northern Approaches to Hobart – Midland Hwy Bypass

DIER have commenced construction of the ‘Northern Approaches to Hobart’, which consists of a major bypass road around Brighton and Bagdad to the east. This bypass will significantly reduce traffic volumes on the existing Midland Highway alignment once completed.

Once the bypass has been completed, the reduction of traffic volumes on the current Highway alignment will increase capacity of the intersection of Crooked Billet Drive. A major grade-separated interchange is proposed in the vicinity of Crooked Billet Drive to service the industrial area (that contains the subject site). Road safety benefits are also expected as a result of the bypass installation and the new interchange at this location.

2.1.3 Crooked Billet Drive

Crooked Billet Drive is a sealed, two-lane two-way road with an approximate pavement width of 7 metres. Crooked Billet Drive provides connectivity to the surrounding industrial areas via the Midland Highway.

A railway level crossing is situated approximately 60 metres to the west of Midland Highway.
2.1.4 Greenbanks Road

Greenbanks Road is an unmarked, two-lane two-way road with an approximate width of 7 metres. The surrounding land uses are predominantly industrial in nature. Greenbanks Road viewed in the vicinity of the site is shown in Figure 5.

Figure 5 Greenbanks Road towards Subject Site

2.2 Traffic Volumes

Traffic volume counts were undertaken during peak hours at the junction of Crooked Billet Drive / Midland Highway on 30th April, 2009. A summary of the data for the AM (8-9) and PM (4-5) peaks are provided in Table 1 and Table 2 respectively.

Table 1 AM Peak Traffic Data

<table>
<thead>
<tr>
<th>Turning Movement</th>
<th>Light Vehicles</th>
<th>Heavy Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left-IN</td>
<td>66</td>
<td>21</td>
</tr>
<tr>
<td>Left-OUT</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>Right-IN</td>
<td>13</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 2  PM Peak Traffic Data

<table>
<thead>
<tr>
<th>Turning Movement</th>
<th>Light Vehicles</th>
<th>Heavy Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left-IN</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td>Left-OUT</td>
<td>39</td>
<td>2</td>
</tr>
<tr>
<td>Right-IN</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Right-OUT</td>
<td>77</td>
<td>6</td>
</tr>
<tr>
<td>Total IN</td>
<td>38</td>
<td>15</td>
</tr>
<tr>
<td>Total OUT</td>
<td>116</td>
<td>8</td>
</tr>
</tbody>
</table>

Based on the turning movement surveys, Crooked Billet Drive is likely to carry in the order of 1,800 vehicles per day (based on the peak traffic volumes representing 10% of average daily traffic volume). It is also noted that a large proportion of traffic travels to and from the south along Midland Highway.

2.3 Road Safety Performance

Available crash data can provide valuable information on the road safety performance of a road network. This information can be used to assist in the identification of potential road safety deficiencies associated with a road network.

Crash data was obtained from the Department of Infrastructure, Energy and Resources (DIER) for the most recent 5 year time period for Midland Highway near the subject site (300m north and south of Crooked Billet Drive), Greenbanks Road, and Crooked Billet Drive. The results are summarised as follows:

- A total of 5 crashes were recorded within the study area during this timeframe;
- Three of these crashes involved injury (one minor injury and two major injuries);
- Both major injury crashes occurred on the Midland Highway as a result of vehicles pulling out/emerging from a driveway or lane;

10 Greenbanks Road, Bridgewater – Traffic Impact Assessment
2.4 Intersection Assessment

The existing intersection configuration of Crooked Billet Drive and Midland Highway is a ‘Give-Way’ signed t-junction, with Midland Highway having priority as shown in Figure 6. A right turn lane has been provided on Midland Highway for southbound traffic entering Crooked Billet Drive. Northbound traffic enters via a slip lane on Midland Highway approximately 80 metres in length.

Traffic entering and exiting the junction are separated by a traffic island, with lane widths of approximately 5 metres for exiting traffic and 10 metres for entering traffic. More than adequate sight distance is available north and south of the junction for vehicles to safely exit (in accordance with Austroads Guidelines).

Figure 6 Crooked Billet Road / Midland Highway Junction

2.5 Access Conditions

Site access is proposed via an existing unsealed driveway approximately 7 metres in width. This will require sealing to accommodate access of increased heavy vehicle traffic. The approximate location of the access point can be seen in Figure 1.

A rail level crossing currently exists on Crooked Billet Drive approximately 70 metres from its intersection with Midland Highway. Adequate signage and warning is provided at the crossing and at the junction.
alerting motorists to the existence of the level crossing. Rail freight services are infrequent at this location, with approximately 2 trains per day.

2.6 Specific Users of the Transport Network

2.6.1 Light Vehicles
From observations taken on site, light vehicles represent the most significant proportion of traffic utilising the roads within the study area. DIER traffic data indicates that heavy vehicles represent approximately 8.8% of all traffic on the Midland Highway near the intersection with Crooked Billet Drive.

2.6.2 Pedestrians
There is no dedicated pedestrian infrastructure provided near the subject site. Pedestrian footpaths are currently not present on either side of Crooked Billet Drive, Greenbanks Road, or Midland Highway in the vicinity of the site.

2.6.3 Heavy Vehicles
The surrounding land uses are predominantly industrial in nature. As a result, heavy vehicles represent a significant proportion of vehicles utilising the roads within the study area. From Section 2.2, heavy vehicles accounted for approximately 23% of the total volume of traffic entering Crooked Billet Drive during the AM peak survey and approximately 28% during the PM peak survey.

2.6.4 Public Transport
Metro Tasmania operates bus services along Midland Highway. There are two bus stops on Midland Highway surrounding the subject site for the northbound and southbound approach. The bus stops are located approximately 400 metres north of Crooked Billet Drive.
3. Traffic Impacts

3.1 Traffic Generation
The traffic generation potential of the proposed development has been based on approximations provided by Poulos Seafoods. The following approximations are based on the existing operation at Macquarie Wharf:

- Couriers – approximately 1 vehicle / day;
- Polybox deliveries – 3 trucks / week (≈ 1 veh / day);
- Fish transport – 3-6 trucks / week (≈ 1 veh / day); and
- Staff – 30 vehicles / day (maximum based on 25-30 staff).

Therefore the typical traffic generation rates applicable to the proposed development are likely to be an average daily generation of 33 vehicles per day. This includes approximately 3 trucks per day.

3.2 Access Impacts

3.2.1 Sight Distance
The sight distance available at the access is more than adequate for eastbound and westbound traffic in accordance with Planning Scheme and Austroads requirements.

This is due to the level nature of Greenbanks Road and the lack of obstructions on either side of the subject site.

3.3 Road Safety Impacts
The proposed development is not expected to have any significant adverse impact on road safety for the following reasons:

- The traffic generated by the proposed development is relatively low, and will not have a significant impact on traffic efficiency of Greenbanks Road;
- Greenbanks Road has maintained a high level of road safety performance with no reported crashes within the last five years;
- Adequate sight distance is available at the access in both directions; and
- The low vehicle speeds and level nature of Greenbanks Road are conducive to safe movement by all users of the transport network.
4. Parking Assessment

4.1 Parking Provision

During the site visits it was observed that there was no on-street parking at any point along Greenbanks Road.

An open area of approximately 3,200m² is available on site for staff parking and freight vehicle manoeuvring. Based on the relatively low traffic generation from the development it is believed that this area will be sufficient in catering for all traffic utilising the site.

The parking needs of the development have been assessed from the Brighton Planning Scheme and from first principles.

4.2 Planning Scheme Requirements

The proposed development would fall under "Factory" in the Brighton Planning Scheme, 2000.

The parking requirement for this use is:

- 1 space per 50m² of Gross Floor Area (GFA), or
- 2 spaces per 3 employees, whichever is greater

In this case, the GFA is approximately 1,500m², and staff numbers are up to 30 per day.

The parking requirements under the Planning Scheme are:

- 30 spaces based on GFA; or
- 20 spaces based on staff numbers.

Therefore the proposed development requires a total of 30 spaces according to the Planning Scheme.

4.3 Operational Parking Requirements

Based on the current operations at Macquarie Wharf, during peak times, up to 30 staff may be present at one time. Parking is currently provided around the perimeter of the site, with provision for over 30 spaces. Observations suggest that during peak times, approximately 20 to 25 spaces are required. It was also noted that many staff car-pooled, with 2 or more staff members arriving in one vehicle.

Given that the staff parking is currently provided free of charge on the existing site, it is likely that the parking that is observed at the site represents all staff that arrived by car (this is due to the presence of voucher parking in the surrounding area of the Wharf).

It is likely that this trend will continue at the proposed site at Bridgewater. The provision of 30 parking spaces as required under the Planning Scheme is therefore considered to be adequate.

The parking area should be clearly defined around the perimeter of the site, so that loading/ unloading and heavy vehicle manoeuvring areas are not compromised.
5. Conclusions

This traffic impact assessment has been conducted following a review of available traffic data and information, standard codes and guidelines, and other supplementary traffic data and information.

This report recommends that the following measures be undertaken to support the proposed development:

- The gravel car parking and loading area be sealed, as well as the driveway to Crooked Billet Drive.
- Staff parking areas be clearly defined near the perimeter of the site.

The key findings of this report are as follows:

- The traffic generated by the proposed development will not have any significant adverse impacts on transport efficiency or road safety;
- The sight distances at the access point to the site are adequate in both directions;
- The existing junction of Crooked Billet Drive / Midland Highway is currently operating at an acceptable level; and
- The parking area provided on site will be sufficient in catering for all staff and freight.

Subject to the recommendations above, the proposed development is supported on traffic grounds.
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<td>Anila Gunadasa</td>
<td>Keith Midson</td>
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