HSEQ Hazard Analysis Report On Operations at Lady Barron Port
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Bryan Bird Profile:

Bryan Bird is a Safety Specialist with over 10 years’ experience in HSE Management and Supervision. Bryan has an Advance Diploma in OHS and a Diploma in Quality Auditing and cert 4 in Training and Assessment. Bryan is also a trained and experienced Incident Investigation team leader using Icam-RBA and Taproot investigative tools.

Bryan has been involved in some of Australia’s biggest infrastructure projects working in HSEQ roles, including Chevron’s Gorgon LNG, Woodside’s Pluto LNG, Sino Iron Ore, Karrara Mining, Rio Tinto’s Yandi expansion Project and many others.

Bryan also has extensive General Management experience and has managed a national quality food business for over 8 years growing the business from a start up to turnover of around 6 million in just 18 months. Bryan has a passion for Grass Roots safety.
Introduction:

The Lady Barron Port consists of a 2.1 million dollar upgrade which includes stockyard maintenance works, upgrades to sheep and cattle facilities, demolition of existing transit shed and a new transit shed and wharf strengthening work.

On inspection of the Lady Barron Port at the request of Furneaux Freight I have completed a General three step Hazard matrix using the following diagram. The aim of this Report would help stakeholders to complete their own risk assessment and then place the appropriate controls to eliminate or reduce the Hazards according to the hierarchy of control. See page 5

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During my time on Flinders Island I also met with several community stakeholders to address the unwarranted media attention which undermined the Good name and service of Furneaux Freight.

Furneaux Freight has been servicing the Flinders Island community for the past 20 years. During this time they have provided a safe, cost effective and reliable shipping service to the remote Island community. The Flinders Island community have voiced their overwhelming support to Furneaux Freight over the past several months. The Furneaux Freight Directors are community focused and communicate with their business customers on daily basis.

The Furneaux Freight Directors also visited the Island to stop any rumours about the shipping service being in trouble.
Hierarchy of Control

**Elimination**
Design it out

**Substitution**
Use something else

**Engineering Controls**
Isolation and guarding

**Administrative Controls**
Training and work scheduling

**Personal Protective Equipment**
Last resort

Control effectiveness

Business value
Legislation

*The Occupational Safety and Health Act 1984* places a 'duty of care' responsibility upon employers and employees at the workplace.

Employers must maintain safe and healthy workplaces and provide information, instruction, training and supervision for employees. They must consult and cooperate with elected safety and health representatives and, where other means of hazard prevention are not practical, provide protective equipment.

Employees must take reasonable care to ensure their own safety and health and safety of others in the workplace, use protective equipment as instructed, and comply with agreed safety and health work procedures.

*The Occupational Safety and Health Regulations 1996* require employers to identify hazards, assess risks and apply control measures. Employers must be familiar with any relevant codes of practice, national standards and other documents that have become part of the legislation.

Regulation 4.53 covers plant that lifts, suspends or lowers people, equipment or materials - this includes forklifts.

Regulation 4.55 applies specifically to forklifts, requiring employers to ensure forklifts are operated having regard to the operating instructions of the designers or manufacturers, or operating instructions developed by competent persons. It also requires operators to be at least 17 years of age.

Regulations 4.55(1)(a)(ii) and 4.55(2)(b) require all types of forklifts to be operated in accordance with the relevant operator’s manual or in accordance with instructions developed by a competent person for the operation of the forklift.

Offences against these regulations can result in a maximum penalty of A$25,000.
Australian Standards

Australian Standard 2359.2 - 1985 provides practical advice and guidance in relation to the operation of forklifts.

Australian Standard 2359.1 - 1995, *Powered industrial trucks - General requirements* includes recommendations for forklift ratings, stability, brakes, tyres and rims, fork arms and attachments, operator protection, controls and control symbols, electrical equipment, materials and manufacture, design requirements, particular applications, hazardous areas and markings.

Other parts of Australian Standard 2359, *Powered industrial trucks*, are:

2359.3 - 1995 - Counterbalanced forklift trucks
2359.4 - 1995 - Reach and straddle forklift trucks
2359.5 - 1995 - Control Symbols
2359.6 - 1995 - Safety code
2359.7 - 1995 - Terminology
2359.8 - 1995 - Pallet stackers and high lift platform trucks
2359.9 - 1995 - High lift rider trucks
2359.10 - 1995 - Forklift trucks - hook-on type fork arms
2359.11 - 1995 - Forklift trucks - hook-on type fork arms and fork carriers
2359.12 - 1996 - Hazardous areas


Schedule 3.1 of the *Occupational Safety and Health Regulations 1996* [PDF 536k] requires these Guidelines to be available for access by persons working at workplaces where forklifts are used.
Forklift Standards

Forklifts Introduction
Industrial lift trucks or forklifts, as they are commonly known, are used to lift, transport and place goods and materials. They include counter-balanced or ride-on forklifts, pedestrian operated forklifts, rough terrain forklifts and a number of specialised forklifts.

Forklift injuries
Forklift accidents resulted in over 40 fatalities in Australia between 1990 and 2002 inclusive.

Forklift operators can receive serious or fatal injuries from forklift accidents, particularly from roll-overs, if no seat-belt or seat side restraints have been fitted or used by the operator.

Other workers are also in danger. A significant proportion of forklift related injuries involved other workers in areas of forklift operations.

Safe Systems of Work
Employers can ensure a safe and productive workplace through agreed safe systems of work, training, supervision and consultation between employers, employees and elected safety and health representatives.

*Training operators to a high skill level will not result in safe forklift operation if unsafe systems of work are used in the workplace.*

The workplace should have:

- Clearly defined traffic areas;
- Separation of pedestrians from forklift operation and other vehicles;
- Speed restrictions and signs inside and outside the workplace (congested areas require lower speed limits);
- Mirrors and visual aids at corners and obscured hazards;
- Adequate lighting;
- Traffic signs where appropriate;
- Loading areas isolated from high traffic areas;
- Give way rules where applicable;
- Flexible or transparent doors where practicable;
- Forklift maintenance and reporting procedures; and
- Parking area restricted to authorised people.
Safe Operation of Forklifts

The following is a summary of general information for employers and employees for safe operation of forklifts and is not to be used as an instruction manual, or as a substitute for training.

Roll over

- Don’t drive the forklift across an incline
- Drive up and down gradients slowly
- At all times keep the load facing upwards
- Be careful with unloaded forklifts - they are often more unstable than loaded forklifts
- Keep the forklift level - avoid uneven driving surfaces, dips and pot-holes
- Keep the load as low as possible when moving
- Don’t make sharp turns, or turns at speeds above 5 km/hr
- If the forklift becomes unstable and begins to roll over, DO NOT ATTEMPT TO JUMP CLEAR. BRACE YOURSELF AND STAY WITH THE FORKLIFT.
- While stacking with off-centre loads at full height – on a surface with a 2 per cent difference in gradient (20 mm in 1 metre) – stability can be significantly affected.
- Drive across inclines or uneven ground such as potholes (particularly with a height difference greater than 20 mm across the front wheels)

Moving Loads Trucks/Forklifts

- Loads must not be suspended, or travel, over a person [Occupational Safety and Health Regulation 4.53(1)].
- Keep clear of other people when moving and loading objects
- Secure the load to prevent it sliding or rolling off the fork arms
- Avoid sudden stops and starts
- Never exceed the recommended load mass.
- Avoid driving any load shifting equipment on uneven ground and or uncompacted surfaces when bogging or load shift may happen.

To Note:

*While I have included the fork Lift Standards, it’s important to note that Hazards identified can severely reduce the stability of any lifting or working plant/equipment on the site. Including the following:*

- Semi- Trucks
- Side Loaders
- Container Loaders
- Tele-handlers
- Elevated Work Platforms (E.W.P)
- Scissor lifts
# Hazard Identification and Control

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| 1. **Substantial uneven surfaces, Including Erosion to Stormwater channels, Indentations/cracking between concrete Pads and water filled pot holes. Sections of pavers are missing** | Load falling from heights, load shift causing roll over of plant, Injury from falling on uneven ground. | ▪ Rework and apply a Compaction methodology that will be to high standard.  
▪ Redesign the yards stormwater run-off channels to eliminate water damage to paving areas and pooling.  
▪ Concrete the strips that separate different sections of slabs in the yard.  
▪ Re-pave all damaged areas |
| 2. **No Fire hose near hydrant** | Unable to Fight a fire onsite using Hydrant | ▪ Supply Hose at hydrant to allow firefighting capability for all onsite personnel in case of a fire. |
| 3. **Un-level gravel decanting area west side of transit shed.** | Bogging of Forklift  
Load Shifting  
Manual Handling issues moving Pallet Jack in the wet ground.  
Load Falling from unstable ground conditions. | ▪ Make a level pad wide enough to allow all containers to be decanted on solid level concrete, using forklifts and pallet jacks.  
▪ Level concrete will eliminate wheel bogging and manual handling issues when ground becomes wet. |
| 4. **Unable to open main gate restricting access during a Power Cut** | Emergency Services not able to get access to Yard.  
Plant and equipment locked in Yard | ▪ Supply main gate master key to site Staff when there is a power outage. |
| 5. **No Hazard Storage Area on Site** | Liquids and Gases stored next to each other.  
Spillage of Hazard Liquid  
For example, Class 5 oxidising agents, such as solid pool chlorine, are incompatible with many other substances | ▪ The separation of chemicals from other classes of dangerous goods.  
▪ Bunding of area.  
▪ Environmental Policy (Admin) |
| 6. **Uneven edge between decanting laydown and shed entry** | Load shift  
Load falling  
The roller door gutter creates an uneven surface and causes load shift from the fork lift wheels hitting the rut. | ▪ Smooth out the surface where the shed slab meets the outside slab |
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| 7. **No control over security** | Unauthorised Entry to site  
Stealing of Plant, Goods and Equipment.  
Uncontrolled swipe access  
Unable to lock main roller door. | • Replace/Repair Fence  
• Control Access Cards  
• No public access to Authorised areas  
• Locks fitted to inside of door |
| 8. **Reversing trucks and trailers up and down the yard. Having to turn equipment and Plant around on public road.** | Impacting with other People  
Plant Equipment  
Public | • Spotters  
• Traffic management Plans (TMP)  
• Safety Management Plan |
| 9. **Unstable docked Vessel** | Ramp is drifting sideways  
Possible damage to Ramp, Vessel or wharf | • Place another bollard holding the real of the Vessel in place |
| 10. **Movement to top of Ramp** | The Ramp moves every time Plant and equipment is driven over it causing cracking in the concrete. This will continue to weaken the structure | • Reinforce the rebar and re-concrete the top section. |
Report Findings

Food Handling HACCP

Hazard Analysis Critical Control Points are an integral part of the food supply chain process and vital for helping the Industry maintains high quality control standards.

If we apply the HACCP principles to the Lady Barron Port as being a (Critical Control Point) in the process of handling food then we could say with certainly that this control point weakens the high standards already in place. Food handling at the Lady Barron Port is facilitated outside the transit shed on unsealed gravel and open to the extreme weather. Ideally the decanting of containers would be facilitated inside the transit shed.

All steps shall be taken to identify, avoid, eliminate and control the risks of contamination.

Recommendations

The assessment of risk shall be documented by local permit issuing authority (Flinders Island Council) and HACCP principles shall be used to determine critical control points for Hygiene Control and decanting.

The laydown area needs to be levelled out, concreted and enclosed. A suitable solution could be obtained by building a covered in structure that will allow access for side loaders.

Goods Handling Quality Control

Keeping the goods and produce clean, dry and in good condition is important for Furneaux Freight and its Flinders Island Customers. Being a remote Island community Customers must plan weeks in advance to ensure there goods are ordered, shipped and delivered in time. It’s imperative all goods arrive on the island in pristine condition and ready to be presented to the public for sale. The decanting area is not suitable for keeping goods, clean and dry because it has no covered roof or walls. Containers are simply assigned to a gravel laydown area which is exposed to all weather conditions. Decanting is facilitated in the pouring rain and wind. The lack of an enclosed decanting area diminishes the quality control point and reflects poorly on the shipping company.
Furneaux Freight Committed to Quality

Furneaux Freight have constructed a purpose-built distribution facility in Launceston to enhance their Flinders Island Freight business. This purpose-built facility is a testament to the commitment Furneaux Freight has in providing a supply chain with excellent Quality Control Points.

Wash down bay

Currently, there is no washdown area on site for drivers, operators, and staff to wash down plant and equipment. Most drivers have a need to wash down their plant and equipment on site because it often gets contaminated with weeds and soils from farms.

Recommendations:

- In order to contain wash water, the wash down bay pad should be of sufficient size to prevent any over-spray or splashes from escaping its confines. A recommended rule is for the wash down pad being designed to have roughly 2m greater width and length than the largest vehicles to be washed. The pad must be made from an impervious material such as concrete and engineered to withstand the loads which will pass over it throughout the life of the pad without structural damage.

- The wash down bay pad should have a raised perimeter bund at least 75mm high and 100mm wide surrounding the pad on which the washing is to occur unless alternative containment measures such as walls have been proposed. Bunding in the form of installed speed humps at the entry and exit points of the wash bay should also be provided in order to divert surface rainwater run-off away from the wash area.
• The wash bay floor should be graded to drain towards a collection point or channel connected to the sediment trap or pump tank. The wash bay floor and the drainage channel must have a minimum grade of 1:80. This will ensure the wash water is able to drain adequately without pooling or overflowing the bunds.

• A sediment trap is often required to remove sediment from wash down bay wash water prior to disposal. The size of the sediment trap required will depend on the contamination levels of the vehicles being washed, the volume and flow rate of the incoming wash water and the time needed for sediment to drop out of the wash water in the trap. Sediment traps should be inspected and cleaned on a regular basis to remove sediment.

Oversize loads

The current security gate design and configuration does not support the Islands needs in allowing the transporting of oversized loads out of the port. The Gates are too small. The gates are on rollers that track inwards to a single bollard fixed between them.

There is another gate on the east boundary road however; this is not a suitable and safe option for all transporting requirements. It is my understanding housing modules have been delayed from being shipped to the Island because they are unable to be moved out of the Tas-Ports yard. They are not suitable to be moved via the east entrance.

Recommendations:
• Re-design the gate configuration to allow oversized loads access and egress in accordance to main road requirements. The centre bollard could be designed to be removed when an over-size load needs to be moved.
• If you can drive it off the boat, you can drive it out the gate.

The Yard and Transit Shed

The yard design and layout coupled with its gradient all need to be considered when implementing risk controls. I have identified and assessed some of the risks within the yard however I understand risks can change daily. The yard has seen its fair share of wear and tear from roll on, roll off activates over the years. The sloping gradient coupled with constant rain, heavy traffic movements have all degraded the surface areas, fencing and laydowns. The Transit shed is undersized and does not allow Sideloader access which would then allow containers to be decanted inside the shed.

Recommendations:
• I would recommend fundamental design elements and principles be incorporated into the construction and repair of the yard surface, including a high level of earth compaction to underpin new paving and concrete surfaces.
• Replace all missing pavers,
• Repair broken and cracking concrete,
• Level out large indentations.
• Level out the decanting laydown area
• Construct a covered in roof and walls for to decanting quality control.
• Repair all stormwater channel
• Design new gates
• Smooth out rut between laydown and inside transit shed
• Construct a new bollard to tie back of vessel
Report Findings continued:

The Lady Barron Port is a common user port and Furneaux Freight and its employees have no control over who uses the port infrastructure. User entry to the port is gained by swipe cards that access the main gate. Furneaux Freight has no control over who have these security/access cards. The cards are issued by Tas-Ports. The Transit sheds public entry roller door cannot be locked and poses security risks.

Furneaux Freight has identified and evaluated the risks of interface with other operators while using the Lady Barron Port. Their Safety Management Plan has adequate safety measures to control the inherent risks of interface with other contractors in the confined space of the Port yard.

Furneaux Freight is committed to providing a safe work place for its employees, contractors and general public. Furneaux Freight works to The *Occupational Health and Safety Act 1984* and *Occupational Health and Safety Regulations 1996*.

Any safety non-conformances are rectified immediately as per its safety management plan and controls are written into the JHA process.

*Furneaux Freight is committed to providing an open and transparent shipping service to the Lady Barron Port.*
Summary:

Furneaux Freight is committed to working with Tas-Ports and Flinders Island Council to improve its shipping service. The continued level of support from the Flinders Island community remains high because Furneaux Freight have excelled in providing a very safe, reliable and cost-effective shipping service to the Island when other operators could not. Furneaux Freight has invested in supply chain infrastructure to support the Flinders Island operations when others have not.

Furneaux Freight have the experience, knowledge and infrastructure capability’s to ensure the shipping service to Flinders Island remains safe, cost effective and competitive. With over 20 years of servicing the Flinders Island community and a young dynamic management team at the helm I believe the service is in very good hands. The service can remain competitive because Furneaux Freight build and own the vessels the run as well as their Bridport Facility. This ownership model significantly lowers freight costs to Flinders Islanders.

In general, shipping businesses have a high Barrier to entry, making it difficult for other players to set up competitive businesses because of the enormous cost of building ships and servicing them. Another company wanting to tackle this shipping route would need to invest around A$25 million just to set up plus new Tas-Port charges will be introduced into in supply chain because a new operation would have to pay port charges on the mainland.

This in turn would cause a dramatic upswing in freight costs for the Flinders Island Community.
Photos

Uneven Container Levels

Forklift wheel bouncing which can cause load shift

Large sections of Pavers missing, causing big rut holes in Pavers
Damaged Paving, Several Water Filled Pot Holes

Stormwater runoff channel damaged
Severe Uneven Ground, Concrete Cracking
Hole in Concrete Fencing

Severe Water Prolonging

Food goods decimated in unlit nigh{ab} area.

Uneven surface causing load shift during fork lift operations
New Concrete Already Cracking Up

Forklifts having to back down untesty ground over channels, running risk of tool theft.

Unfinished Surfacing

Damaged Run-off channels