



Safety Case Summary

Pinkenba Terminal

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Message from the Chief Executive Officer

Achieving Goal Zero

Safety is a core value for Viva Energy and is always our highest priority. We are committed to not harming people, respecting our neighbours, managing safety as a critical business activity, and publically reporting our performance. Goal Zero is our belief that all accidents and injuries are preventable and it is a commitment that extends throughout every level of our business.

Our Pinkenba Terminal holds a Major Hazard Facility (MHF) operational licence. As a MHF, we are required to submit a Safety Case for assessment by Workplace Health and Safety Queensland. This outlines the stringent processes and procedures that allow us to safely import, store and distribute petroleum products to thousands of customers in Queensland and Northern NSW. This document is a summary of that Safety Case and explains how we manage and minimise the risk of potential impacts of our terminal operations on our neighbours and the community.

Across Viva Energy we take a systematic approach to managing safety and preventing incidents.

This means that at all of our facilities, including the Pinkenba Terminal, safety is embedded into everything we do. All of our equipment is maintained according to accepted industry standards and operated within equipment limits. The mechanical integrity of our equipment and pipework is maintained through inspection programs and safety critical equipment is routinely maintained and tested. We have systems, processes and barriers to ensure safe and reliable operations and we train our people and empower them to stop work at any time to address any safety issues identified.

Our commitment to safety and a Goal Zero mindset along with our Safety Management System all drives us to continuously improve our safety performance. This means we actively pursue opportunities to further reduce our risk as far as reasonably practicable.

Our stated aim is to have a safety performance we can be proud of, to earn the confidence of customers, shareholders and communities in our safety record and to be a good neighbour.

Scott Wyatt
Chief Executive Officer

Introduction and background

This document provides the community with information on Viva Energy's systems and processes that help us to ensure that safe and reliable operations are maintained at our Pinkenba Terminal. It includes a summary of the potential major incidents that could occur, including the hazards that could cause those incidents and the control measures that are

in place to prevent or minimise any impacts to people and the environment. This document is commonly referred to as the Safety Case Summary and is a requirement of the Queensland Work Health and Safety Regulation 2011 (WHS Regulation) for all licensed Major Hazard Facilities (MHFs).



What is a major hazard facility?

Major Hazard Facilities (MHF) are industrial sites that store, handle or process large quantities of hazardous chemicals and/or dangerous goods. Examples include oil refineries, fuel terminals, chemical manufacturing sites and some warehouses and transport depots. Petroleum products are classified as either dangerous goods and/or hazardous chemicals, depending on their physical and chemical properties and effects to human health.

MHF sites must comply with stringent legal requirements, including preparation of a Safety Case and have a Major Hazard Facility Licence (MHF) Licence to ensure they are operated safely.

Viva Energy's Pinkenba Terminal was first licensed as a MHF in 2004.



What is a Safety Case?

To obtain a MHF licence, each facility is required to submit a Safety Case for assessment by Workplace Health and Safety Queensland. In accordance with the WHS Regulations, the objectives of the Safety Case are to demonstrate Viva Energy has:

- Established a robust safety management system;
- Identified all potential major incidents relating to operation of the facility;
- Identified all hazards and threats that could result in the identified major incidents at the facility;
- Conducted a comprehensive and systematic safety assessment of identified potential major incidents;
- Established control measures to eliminate or reduce risk to health and safety as low as is reasonably practicable;
- Implemented an emergency response plan which sets out how to control and minimise any major incident with potential on-site and/or off-site effects; and,
- Established a review mechanism to ensure the safety case and control measures are continually assessed and updated as necessary.

The Safety Case is prepared with involvement from, and in consultation with, employees and health and safety representatives from the Pinkenba Terminal.

What is the Safety Case Summary?

The Safety Case Summary is a summary document that helps to explain our safety processes and controls, as well as any potential impact on neighbours and the community in the unlikely event of a major incident occurring at the Pinkenba Terminal. The document will be updated as required to ensure it continues to accurately reflect community interests and the operations of the terminal.

What is a major incident?

A major incident is an uncontrolled event that involves a Scheduled Material and poses a serious and immediate risk to the health and safety of people.

What is a Scheduled Material?

The WHS Regulations define what materials must be considered in the scope of the Safety Case. The Scheduled Materials at Viva Energy's Pinkenba Terminal are flammable liquids and Liquefied Petroleum Gas (LPG). These are discussed in detail in the 'Scheduled Materials' section of this document.

Pinkenba Terminal

Facility description

Viva Energy's Pinkenba Terminal is one of Queensland's primary petroleum products storage and distribution facilities servicing the fuel, lubricant and bitumen needs of commercial and retail customers throughout South East Queensland and northern New South Wales, including supply of jet fuel to Brisbane Airport. The terminal houses a fuel storage tank farm for gasoline, solvents, kerosene (Jet A1), diesel and LPG, as well as a bitumen plant, biofuels capability, a bulk lubricants plant and road gantries where these products are loaded into trucks for distribution by road haulage. Jet fuel is supplied to Brisbane Airport via a dedicated pipeline from the terminal.

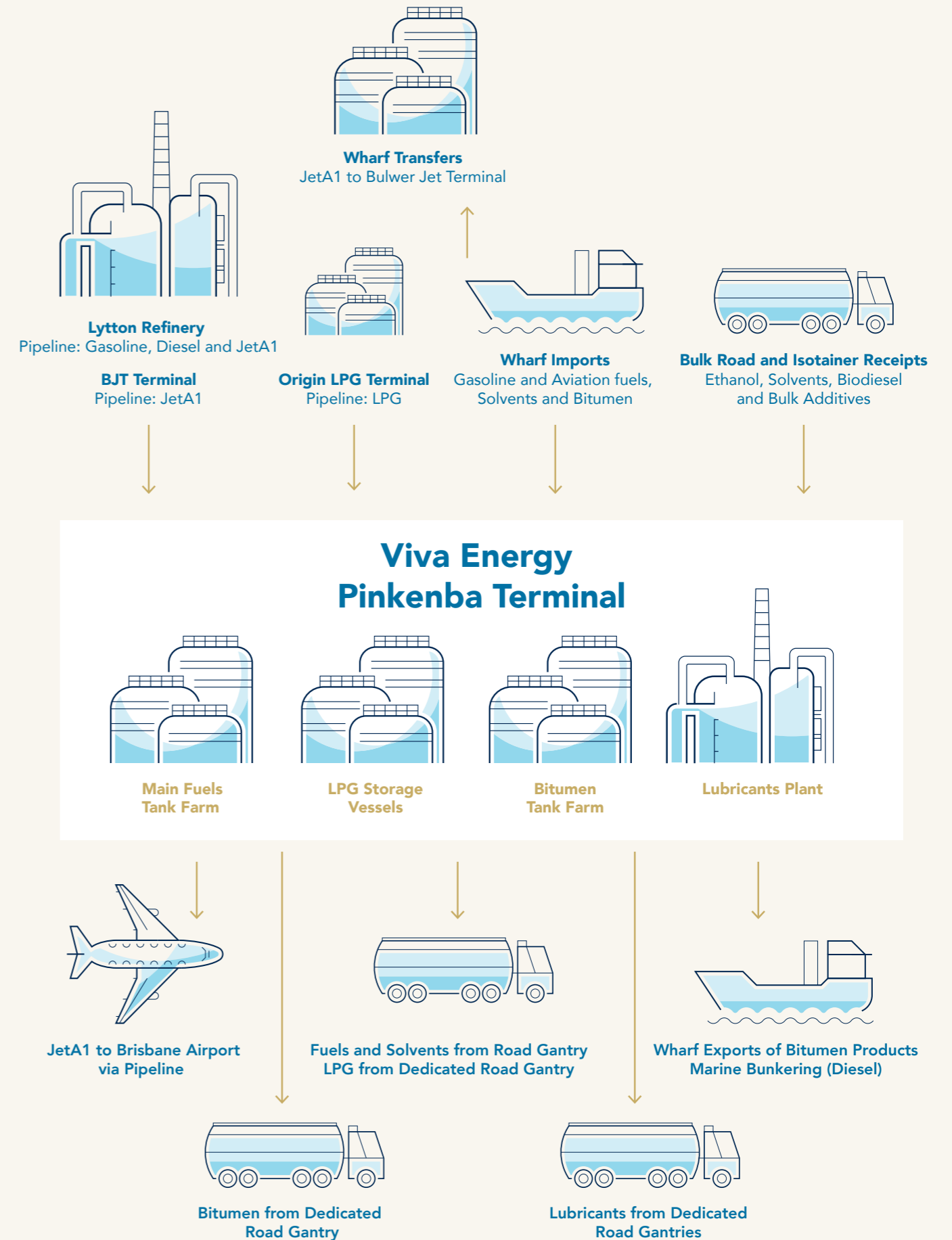
The majority of fuel products stored on site (gasoline, solvents, kerosene and LPG) are received via pipeline, including from marine fuel tankers. Some products such as ethanol (E100) and biodiesel (B100) are delivered to the site by road tanker.

The terminal operates 24 hours per day, 365 days of the year. It has 34 storage tanks with a total capacity of 108 million litres.

The facility is located alongside the Brisbane River on approximately 26 hectares of land and is divided by Tingira Street. It is within the local jurisdiction of the Brisbane City Council.



Supply Chain Flow Diagram



Safety Assessment

A safety assessment involves an investigation and analysis of the potential major hazards and major incidents to provide a detailed understanding of all aspects of risk to health and safety associated with any major incidents.

The safety assessment was undertaken in accordance with published guidance from SafeWork Australia which involves the process outlined below:

- Identify the Scheduled Materials on the site;
- Identify all of the potential major incidents (those which pose a serious and immediate risk to health and safety) that could occur involving these materials;
- Identify all of the things that could go wrong (hazards) that could cause these incidents to occur;
- Identify the equipment, systems and procedures (control measures) in place to ensure those hazards don't eventuate;
- Identify those measures in place to minimise the impact of an incident should it arise;
- Assess the robustness of the identified control measures;

- Demonstrate that all control measures in place are adequate to pass the test of reducing risk so far as is reasonably practicable (SFARP);
- Identify any remedial actions that may be required to introduce new or improve existing control measures; and,
- Ensure the emergency plan addresses all of the possible types of potential major incidents and complies with the WHS Regulations.

These assessments are carried out by a range of Viva Energy staff, including shift operators, health and safety representatives, engineers and managers working at the Pinkenba Terminal. The process is reviewed by Workplace Health and Safety Queensland. All assessments are carried out on the basis of the worst-case scenarios whereas the actual risk of a major incident occurring is extremely low.



Scheduled Materials

Viva Energy's Pinkenba Terminal has a number of materials on-site that are classified as Scheduled Materials under the WHS Regulations.

The WHS Regulations define what materials must be considered in the scope of the Safety Case. If not managed correctly, the scheduled materials on site may contribute to or be affected by a major incident.

All materials, whether scheduled or otherwise hazardous, are stored in specifically designed facilities, taking into

consideration the properties of the materials. Handling of these materials is undertaken according to documented practices and protocols supported by instrument control systems designed to ensure equipment is operated within its designed parameters.

Emergency shutdown systems are installed throughout the facility and an emergency response plan with appropriate fire protection systems is in place.

Flammable Liquids

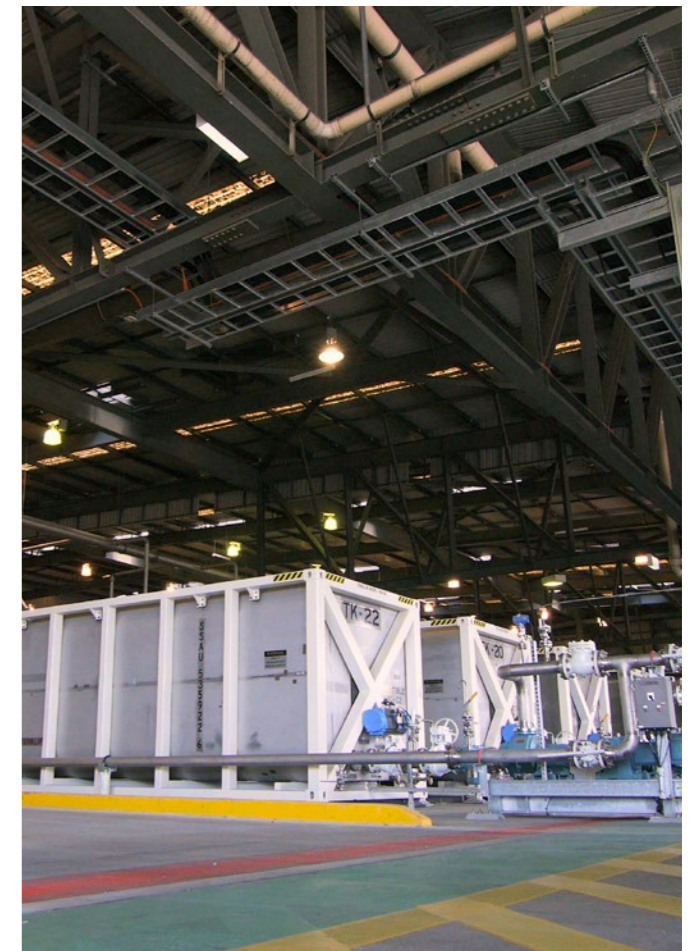
The scheduled materials in the form of flammable liquids present or likely to be present are gasoline, solvents and kerosene (Jet A1). This group of scheduled materials has a low flashpoint.

These products are stored in tanks in the tank farm area and transferred via pipelines to tankers in the main truck loading gantry for distribution throughout Queensland and northern New South Wales, in compliance with regulatory requirements.

Flammable Gases

The scheduled materials in the form of flammable gases present or likely to be present is Liquefied Petroleum Gas (LPG).

LPG is a colourless, odourless, flammable material used for heating and transport purposes. LPG stored at the Terminal primarily consists of Propane, but may also include Butane. LPG is stented for safety prior to storage on site, and stored in pressurised storage vessels before transfer by pipeline to tankers for distribution by road.





Control measures and hazards

A hazard is anything in the workplace that has the potential to harm people. A risk arises when it's possible that a hazard will actually cause harm.

A potential hazard in the bulk storage of hazardous chemicals and dangerous goods is the potential for products to escape and the potential for fire or explosion.

Control measures to manage these hazards are the equipment, systems and procedures in place to prevent this occurring.

Potential threats to control measures that could potentially lead to a hazard being realised to cause an incident include: corrosion; equipment failure that causes leaks; over-pressurising or over-filling; failure of operating or maintenance procedures and mechanical impact and vibration.

The Control measures in place to protect against these hazards include:

- Equipment design specifications;
- Instrumented control and trip systems;
- Leak detection systems;
- Pressure relief systems;
- Detailed inspection strategies and schedules;

- Operating and maintenance schedules, procedures and training
- Permit to work procedures
- Site access controls;

Control measures are also in place to ensure that in the unlikely event of an incident, it is detected and controlled quickly to minimise the likelihood that it will become serious, including:

- Site layout and equipment separation;
- Emergency shutdown devices;
- Site alarms; automated water and firefighting foam deluge systems;
- Fixed fire-fighting facilities; and
- A comprehensive emergency response plan that is tested and updated on an annual basis.

Viva Energy's Pinkenba Terminal has two dedicated firewater storage tanks and pumps and these are supplemented by the town water system for fire response purposes. These control measures are fully documented in the site Safety Management System and are subject to performance assessment and ongoing monitoring to ensure they are reliable and robust.

Impact of a Potential Major Incident

The potential major incidents that have been identified in relation to the release of liquid hydrocarbons are fire and explosion. In the unlikely event of an incident occurring, the impact of any liquid release and subsequent fire is expected to be contained within the Pinkenba Terminal, although it is possible there would be smoke impact on surrounding neighbours and depending on the wind direction could impact the nearest residential area of Pinkenba Village, which is located approximately 1km from the Terminal.

The potential major incident that has been identified in relation to the release of flammable gas is a fire beneath a LPG storage vessel, heating up the vessel and causing failure due to over-pressure, finally resulting in a fireball explosion. This is referred to as a Boiling Liquid Evaporating Vapour Explosion (BLEVE). The risk of this occurring is reduced to so far as is reasonably practicable by comprehensive systems and procedures. This incident, if it were to occur, would cause significant impact on surrounding industrial and residential areas.

In the unlikely event that the effects of an incident go beyond the perimeter of the Pinkenba Terminal, emergency services and local council would work with Viva Energy to manage any impacts to the community.

Continuous Improvement

Viva Energy is committed to continuous improvement in order to constantly strive to improve our safety performance and minimise risks.

Some examples of improvement activities include:

- Decommissioning of the former lubricants and grease plant, including associated natural gas feedstock pipework and removal of associated dangerous goods;
- Increase in fire water storage capacity by 4 million litres as part of the emergency response capabilities on site;
- Replacement of the existing jet fuel pipeline from the Terminal to Brisbane Airport with a new higher integrity pipeline with leak detection capability installed;
- Relocation of administrative staff and laboratory staff to new off-site buildings and facilities thereby reducing the number of non-essential personnel on site.

Safety Management System

Viva Energy's Health, Safety, Security and Environmental Management System (HSSE MS) Manual describes the Safety Management System that applies at the Pinkenba Terminal.

It is underpinned by Viva Energy's General Business Principles, with specific reference to Principle 5, which states:

"Viva Energy companies have a systematic approach to health, safety, security and environmental management in order to achieve continuous performance improvement. To this end, Viva Energy companies manage these matters as critical business activities, set standards and targets for improvement, and measure, appraise and report performance externally. We continually look for ways to reduce the environmental impact of our operations, products and services."

Emergency Response



The Pinkenba Terminal Emergency Response Plan (ERP) has been developed in conjunction with the Queensland Fire and Emergency Services (QFES) as the designated combat agency. Staff at the Pinkenba Terminal are trained in first response as well as interagency interaction. The Pinkenba Terminal has an on-site alarm and when activated, there is an automatic call-out to the combat agency.

The QFES will lead a response to an incident where required. As the combat agency, the QFES liaises with Viva Energy and other emergency services such as Queensland Police. The Brisbane City Council is informed of any potential off-site risks associated with facility operations.

Training exercises, both desktop and simulations of various incident scenarios are also undertaken on an annual basis. This involves staff from the site and other combat agencies. In the unlikely event of a major incident, emergency services would notify and inform any impacted residents and businesses including any actions required to be taken, as well as any potential disruptions such as road closures.

Should an emergency be related to a major incident, following investigation, Viva Energy would provide a report to

local residents and businesses describing the incident, Viva Energy's actions to prevent any recurrence of the incident and any recommended actions to eliminate or minimise risks to health and safety.

Viva Energy is an active member of the Gateway Mutual Aid Group, a group of industrial participants within the local area who provide mutual aid to other members in the event of an emergency.

Fire-fighting and deluge systems

All major storage tanks are fitted with water deluge systems to provide cooling in the unlikely event of fire. Storage tanks containing flammable products are also fitted with foam protection. Additional foam and water fire-fighting facilities are located strategically around the facility.

Firefighting and deluge systems are regularly inspected and tested to ensure they operate on demand. The QFES, as the control agency, directs firefighting response, with support from Viva Energy personnel.

Terminal Alarms

Alarms are vital to ensure on-site personnel respond quickly and safely to any incident. The primary purpose of alarms is for on-site personnel to take action. The alarms are loud and may be heard off-site.

The Pinkenba Terminal alarm system is a two-tone audible system that also alerts emergency services.

Alarms

There are two types of alarms:

General Alarm – 30 seconds of an alternating pitch of the alarm. In the event of an incident, the general alarm will sound for at least one minute or more.

All clear – An all clear will be announced by the speaker system across the site and will inform that, if there has been an incident, it is now under control.

The alarms are tested on the second Wednesday of every month at 10.00am.

An alarm heard any other time means an incident has occurred on site that requires attention by terminal personnel.

The community does not need to take action when an alarm sounds unless otherwise instructed by the Police or Emergency Services.

If you hear a siren and would like more information you can call:

Operational Issues (24-hour line): 1800 651 818



Appendix 1



Our commitment to health, safety, security and environment

We believe every incident is preventable and are committed to pursuing the goal of no harm to people and protecting the environment.

We call this Goal Zero.

“You have my full support to stop operations at any time if you are concerned about the safety of yourself or others.”

Scott Wyatt
CEO
Viva Energy Australia

vivaenergy.com.au

To make this commitment we will:

- Demonstrate visible and felt leadership for health, safety and the environment
- Ensure that our business plans consider associated HSSE risks including potential impact
- Create targets that measure, assess and report to reduce incidents
- Audit and maintain systems to identify and manage risks and prevent incidents
- Provide appropriate information, instruction, training and supervision
- Comply with our legal obligations and company procedures
- Communicate, support and consult with employees, contractors and stakeholders
- Encourage people to intervene, report unsafe situations and have positive conversations
- Conduct regular reviews and share learnings to continuously improve our performance

More Information

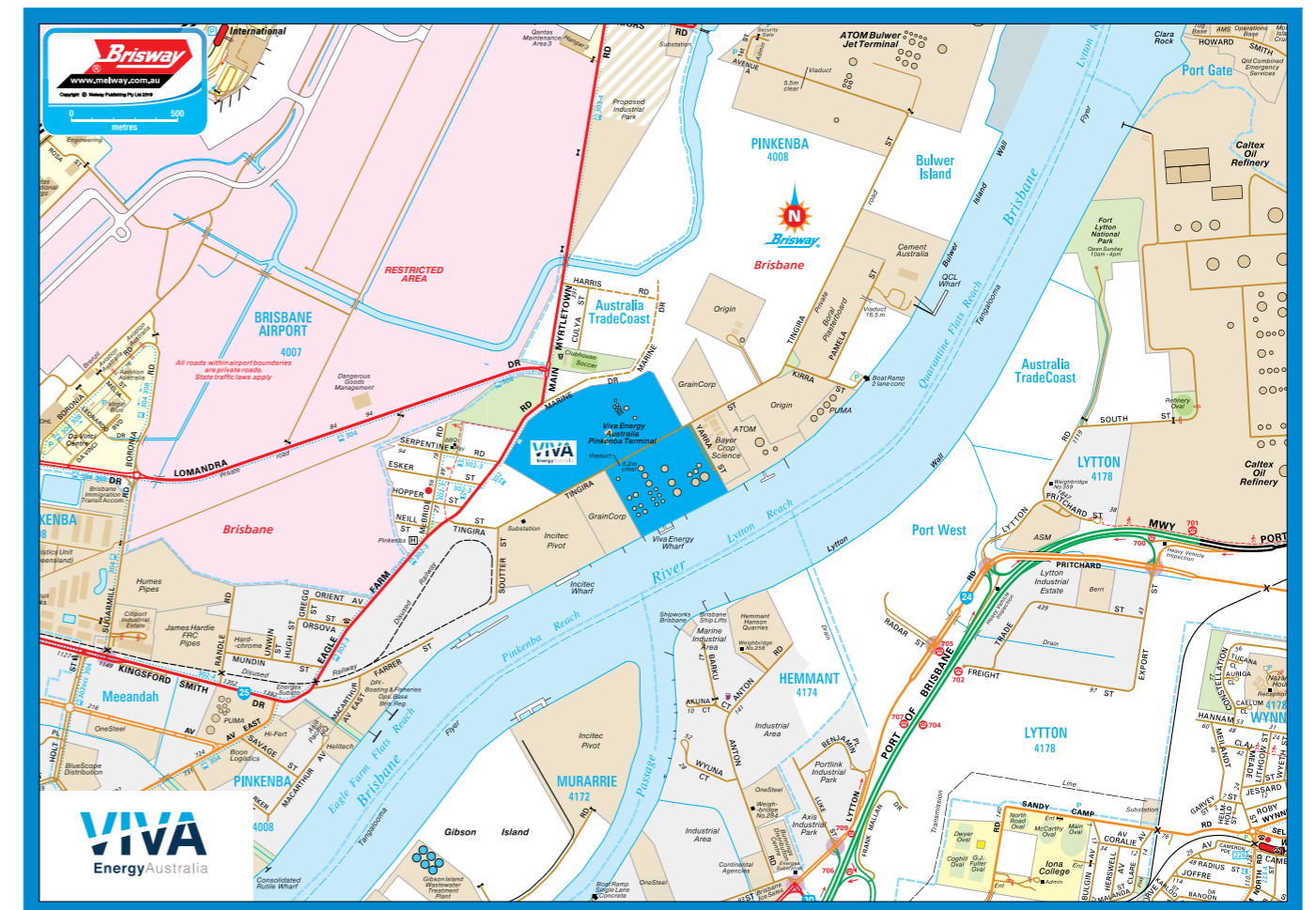
Please contact Viva Energy for further information.

Email: communityrelations@vivaenergy.com.au

Tel: (03) 8823 4444

Viva Energy Australia Pty Ltd

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More information regarding the requirements for Major Hazard Facilities is available from the Workplace Health and Safety Queensland website: www.worksafe.qld.gov.au

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