



PROJECT

Margate Marina Fuel Facilities.

Refuelling Procedures and
Guidelines

CLIENT

Fenshaw Group Pty Ltd

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1. Introduction

This document; ***“Refueling Procedures and Guidelines”*** **has** been produced to provide management controls for the proposed upgrade of the Margate Marina which includes refueling facility as part of the floating pontoon marina.

The upgrading of the Margate Marina refueling facility will meet the demand requirements for the marina users. It will provide improved management controls for boat operators while also mitigating public safety and environmental risks associated with refueling vessels.

The upgraded refueling facility, will be an above ground, self-bunded Fuel Tank, carrying both Diesel and Unleaded for the use of marine vessels. The fuel dispensing bowser will be located on an upgraded refueling floating pontoon.

The Margate Marina is continually reviewing and developing ways to prevent and manage pollution from entering the environment. Refuelling activities involve both manual handling and a need to be aware of the surrounding environment. Unsafe practices can potentially lead to injury and in extreme circumstances death. Fuels if handled incorrectly, and in the wrong environment, can become volatile resulting in harm to both life and property.

When refueling and operating the dispensing equipment, extreme care should be taken to avoid accidents and spills.

We all have a duty of care to protect the marine environment, coastal amenities, and ourselves.



MARGATE MARINA ENVIRONMENTAL POLICY

The Margate Marina is committed to:

- Minimising and managing environmental harm and environmental nuisance where practically possible;
- Conducting the operation of its refuelling wharf, marinas and boat maintaining or repairing activities in a manner consistent with environmentally sustainable development;
- Operating all its activities in compliance with all statutory requirements for protecting the environmental values of the site (e.g. air, noise and water);
- Monitoring and auditing the performance of the Margate Marina Environmental Policy (MMEP);
- Ensuring all Margate Marina employees and members are suitably informed and trained to implement the Margate Marina Environmental Policy;
- Striving to conform to the principles and objectives of Ecologically Sustainable Development;
- Achieving best practice environmental management in design and implementation of the Margate Marina;
- Providing adequate human and financial resources to effectively implement the MMEP;
- Minimising waste generation by use of cleaner operational techniques and reuse and recycling of wastes;
- Consistency meet the requirements of Commonwealth, State and Local Government environmental plans, standards, agreements or requirements; and
- Compliance with all relevant Workplace Health and Safety requirements.



2. Purpose and Scope

The operational aim of Margate Marina is to focus on industry best practice and performance criteria and to integrate their management practices, so that environmentally relevant activities conducted at the Margate Marina and boat maintenance and repair facility is designed to prevent, minimize and manage environmental harm.

This **Refuelling Procedures and Guidelines** document has been prepared so that the Margate Marina can comply with the following Australian Standard;

AS 1940:2004. The storage and handling of flammable and combustible liquids.

The procedure complies specifically with **AS 1940:2004. Section 7 - Fuel Dispensing**;

“This Section applies to sites at which flammable or combustible liquids are dispensed into the fuel tanks of vehicles, boats or other containers. It covers both private and retail installations but does not apply to the bunkering of large vessels or the refueling of aircraft.”

The Refuelling Procedures and Guidelines document is to assist all users to increase their environmental awareness and implement safe working practices when refueling their vessels at the Margate Marina facilities.

Spills of fuels into the marine environment are a concern. The cumulative effects of multiple spills, however small, add up to a significant impact on our marine environment. Spills can occur from wharfs, jetties, slip yards, vessels and launching ramps.

Diesel is classed as flammable combustible fuel, however Unleaded Petrol, (used primarily in recreational boating) is classed as a flammable liquid and extreme care should be taken when storing and handling.

All users of the Margate Marina refueling facilities must be aware of and adopt the outlined procedures when handling and storing fuels.

The Refuelling Procedures and Guidelines applies to all users of the refueling facility;

- Margate Marina staff;
- Margate Marina members;
- Visitors to the Margate Marina; and
- Other boat and yacht operators.



3. References

The following Acts and Standards are applicable and or relevant to this document;

- **AS1940:2004 - The Storage and Handling of Flammable and Combustible Liquids;**
- **The Environmental Protection Act (EPA) 1986;**
- **Environmental Management and Pollution Control Act 1994;**
- **Pollution of Waters by Oil and Noxious Substances Act 1987;**
- **AS 1319 Safety signs for the occupational environment.**
- **AS 1345 Identification of the contents of pipes, conduits and ducts;**
- **AS 1692 Tanks for flammable and combustible liquids;**
- **AS 2419 Fire hydrant installations (series);**
 - **2419.1 Part 1: System design, installation and commissioning;**
- **AS 2441 Installation of fire hose reels;**
- **AS 2444 Portable fire extinguishers and fire blankets—Selection and location;**
- **AS 1841 Portable fire extinguishers;**
 - **1841.4 Part 4: Specific requirements for foam type extinguishers;**
 - **1841.5 Part 5: Specific requirements for powder type extinguishers;**
 - **1841.6 Part 6: Specific requirements for carbon dioxide type extinguishers; and**
- **AS 2906 Fuel containers—Portable—Plastics and metal.**



4. Definitions.

For the purpose of this document, the definitions below apply;

- **Access;** A means by which a person or vehicle can approach or leave a specific location. The term includes walkways, platforms, stairways, ladders, roads and all provisions for safe entry and exit.
- **Bund;** An embankment or wall which may form part or all of the perimeter of a compound.
- **Capacity;** The maximum volume or space within a container or compound. *NOTE: The available capacity of a container is normally less than its full capacity, to allow for ullage or vapour expansion.*
- **Combustible liquid;** Any liquid, other than a flammable liquid, that has a flash point, and has a fire point that is less than its boiling point. Combustible liquids are divided into two classes as follows:
 - Class C1—A combustible liquid that has a flash point of 150°C or less.
 - Class C2—A combustible liquid that has a flash point of greater than 150°C.
- **Compound;** An area bounded by ground contours or by a bund, and intended to retain spillage or leakage. This includes the floor of the compound.
- **Decant;** To pour from one container into another.
- **Dispenser;** A fuel transfer unit, usually combined with a metering device, that is intended principally for the dispensing of liquids from a storage tank to the fuel tank of a vehicle, boat, or aircraft.
- **Ignition source;** A source of energy sufficient to ignite a flammable atmosphere. Examples of ignition sources include naked flames, exposed incandescent material, electrical welding arcs, mechanical or static sparks, and electrical, electronic or mechanical equipment not suitable for use in hazardous locations.
- **MMEP;** Margate Marina Management Policy. Margate Marina internal document.
- **Material safety data sheet (MSDS);** A document which provides information on the identification, health hazards, precautions for use and safe handling of a specific chemical product, and which complies with NOHSC:2011.
- **Tank;** A container intended for the storage or transport of a liquid and having a capacity greater than 450L.



5. Margate Marina

5.1 The Margate Marina Vessel & Portable Tank Refuelling Procedure

The below minimum procedure instructions are taken directly from;

AS1940;2004 The Storage and Handling of Flammable and Combustible Liquids.;

- Section 7; Fuel Dispensing;
 - Section 7.5 Marine Dispensing - Section 7.5.5 - Instructions. The instructions listed in **Table 7.1** shall be displayed in a prominent location where flammable liquid is dispensed.

The following procedure will be distributed to all refuelling facility users, Margate Marina members and Margate Marina staff.

Refuelling must only be undertaken at the designated fuelling facilities. No refuelling to occur at non-designated marina berths or public jetties and wharves;

Only portable fuel tanks conforming to Australian Standard AS/NZS 2906 shall be used to carry fuel.

5.1.1 Before Refuelling;

- Secure the vessel alongside fuel pontoon & secure at minimum of two points
- Remove all ignition sources from area of refuelling - turn off engines, mobile phones & pilot lights, cut off electric power at main switch, no smoking;
- Check that dispensing point is equipped with fire extinguishers & spill kits before commencing refuelling;
- Put all passengers ashore and clear of refuelling stations;
- Cut off electric power at main switch;
- Ensure all passengers are ashore with only the person in charge of the vessel remaining on-board prior to use of the refuelling facilities;
- If filling a vessel tank, close all hatches and the like to prevent fumes entering the hull and lying in the bilges;
- If filling portable tank, place tank on ground in dedicated bunded filling point adjacent to fuel bowser;
- Open pay point door and select correct fuel bowser (unleaded or diesel);
- Make pre-payment at pay point and wait for confirmation of payment before closing door;
- Inspect nozzle, hose and associated equipment to ensure in good working order;
- Remove fuel nozzle from cradle and bring the nozzle / hose to the fuel fill point on the vessel;
- Open fuel cap on the vessel's (or tank's) fuel fill point and place fuel nozzle inside fill point;
- Slowly squeeze trigger to engage fuel for suitable flow;

5.1.2 During Refuelling;

- Maintain contact between the hose nozzle and fixed pipe to prevent static sparks;
- Avoid any spillage, either into the boat or onto water; and



- Carefully monitor filling rate to avoid overfilling (place discharge bucket at overflow point if applicable).

5.1.3 After Refuelling;

- Fill to required level;
- Repeat process if there is a second fill point on the vessel or second tank;
- Bring nozzle / hose back to fuel station (wind up hose and insert nozzle back into cradle);
- Reinstate fuel tank cap;
- Thoroughly clean up all spills with an absorbent cloth and properly dispose of contaminated waste off the boat (spill kit located in wheelie bin on refuelling pontoon);
- Open all hatches and ventilate the boat. Activate bilge blowers (if fitted) and operate for 3-4 minutes;
- If fuel has spilled into the bilges, pump the bulk of the spill manually into sealed containers (not overboard);
- Clean up all remaining fuel with an absorbent cloth; open all hatches and openings and leave boat wide open for at least 30 minutes to vent; and
- If fuel is spilled in the bilges or engine bay put a small amount of detergent or washing powder over the area to minimise ignition risks;
- When completely satisfied that the boat is free of fumes, start the engine before allowing passengers aboard.

5.2 The Margate Marina Bulk Fuel tank re fueling

Refilling of the bulk fuel tanks shall only be completed by trained and competent Northern Fuel (or other fuel distributor) staff in accordance with their approved procedure located in the pump bay. Marina members and general public are prohibited from refuelling directly from the bulk fuel tank.

5.3 The Margate Marina obligations

In accordance with AS1940; 2004, The Margate Marina will provide and comply with the following;

- **Emergency power cut-off**
 - A clearly identified switch or circuit-breaker which will enable the power to be shut off to all dispensing units shall be provided at a location remote from any dispensing unit and easily accessible in an emergency; and
 - **NOTE:** Consideration should be given to incorporating a single emergency stop that would shut off all fuel dispensing.
- **Signs;**
 - A prominent sign on or near the dispenser shall be marked in letters at least 50 mm high as follows:

STOP ENGINE—NO SMOKING
 - The international symbol for 'smoking prohibited' may be used in lieu of the words 'no smoking'. The words 'no flames, pilot lights or mobile phones' may also be added.
- **Other Requirements;**



- Ensure fuel dispensing facility is inspected for safe working order;
- Install trigger delivery nozzles with an automatic cut-off;
- Display standard operating procedures which outline environment management practices;
- Place a fuel spill kit in close proximity to the facility, erect signage showing procedures for the kit's use and ensure it is accessible (i.e. not locked) at all times during refuelling operations;
- Refuel vessel fuel tanks at designated fuel dispensing facilities only;
- Observe instructions for use;
- If refuelling with hand-held containers cannot be avoided, undertake measures to ensure no fuel is spilled into waters; and
- Ensure refuelling tankers have spill control equipment before contracting them for refuelling.

5.4 Training and Inductions

Training for all relevant staff, contract staff, Margate Marina members, vessel owners, shall be undertaken in accordance with the purpose and operation of the Margate Marina Environmental Policy and this procedure to foster an awareness of environmental issues, minimise environmental impacts and inform all relevant individuals of their responsibilities and duties under the Environment Management and Pollution Control Act.

Training will include distribution of documentation to members covering the following:

- Awareness of the Margate Marina commitment to environmental management;
- Instruction on the Margate Marina Environmental Policy;
- Briefing of the Margate Marina Environmental Policies' objectives and targets and updating of these objectives and targets as the MMEP is implemented and evolves;
- Control procedures for day-to-day operational activities which can be followed to minimise environmental impacts;
- Piping, plumbing, pumping and storage tank arrangements;
- Sewage and Pollution;
- Monitoring Potential Hazards;
- Hazardous materials and their safe use;
- Safety procedures;
- Emergency response procedures – contingency plans for non-routine situations;
- Fire Fighting;
- Safe operation of refuelling facilities. (including this document);
- Fuel Spillage;
- Water Quality;
- Storm water drain locations;
- Marina User Regulations;
- Organisational structure and responsibilities; and
- Responsibilities under the Environment Management and Pollution Control Act.

Training will be ongoing and revision training will be conducted at regular intervals to update knowledge in relation to new developments and requirements.



5.5 Spills

For all spills immediately contact Margate Marina management staff at the site office or via phone as displayed at the re fuelling pontoon

When contacting the Margate Marina, you will need to provide the following details;

- Oil/Fuel type spilt;
- Estimated quantity that has been spilt;
- Action taken; and
- Cause of the spill.

5.5.1 In the event of a fuel spill into the water:

- People who create fuel spills are responsible for the reporting and immediate response to the marina manager;
- Use supplied spill kits as per the manufacturer's instructions to contain the spilled fuel; and
- A dedicated spill kit is available on the re fuelling pontoon including spill boom.

5.5.2 For spills less than 100 litres, the following steps should be taken;

- Contain the spill and prevent any further fuel from escaping to the environment using the spill kits provided;
- Clean up the spill using absorbent boom and pads (provided in spill kits);
- Avoid leaving the pads in the water for extended periods of time as they will break down;
- Dispose of all oily waste through the correctly. Margate Marina can assist and advise; and
- Ensure that all actions and equipment used is recorded.

5.5.3 For Spills greater than 100 litres, the following steps should be taken;

- Contain the spill and prevent any further oil or fuel from escaping to the environment using the spill kits;
- The Margate Marina will control all logistics and planning regarding the deployment of equipment belonging to external parties;
- Contain and clean up the spill as best as possible with the equipment provided (spill kits etc.);
- Avoid leaving the pads in the water for extended periods of time as they will break down;
- For large volumes oil/fuel spills, focus on containing the spill and preventing further release rather than dealing with the spilt oil itself; and
- Be aware that the major spill response equipment may take considerable to arrive onsite; this needs to be accounted for when deploying spill response equipment.

In an emergency and/or incident the person responsible must immediately notify the appropriate Authorities (EPA and Margate Marina representative) so as they become aware of the emergency or incident resulting in a release of contaminants not in accordance, or reasonably expected to be in accordance with this procedure.

The notification of any emergency or incident must include, but not limited to the following information:



- The name of the holder of the development approval;
- The location of the emergency or incident;
- The name and contact details of the Margate Marina project manager, or designated contact person;
- The time of the release;
- The time the operator became aware of the release;
- The suspected cause of the release;
- The environmental harm caused, threatened, or suspected to be caused by the release; and
- Actions taken to prevent any additional release and mitigation measures implemented to manage environmental harm.

All incidents must be recorded.

The EPA Director must be notified, in accordance with EMPCA, if the release may or has caused serious or material environmental harm.

CONTACT

EPA Director – 1800 005 171.

5.6

5.7 Other Information

The additionally following advice and information is offered to all vessel owners;

Check your fuel:

- Always replace old fuel – never go out with fuel which is more than six months old;
- Make sure you have enough fuel for the trip – 1/3 out, 1/3 back and 1/3 in reserve;
- Clean your fuel tank at least once a year with a suitable solvent and dispose of old fuel responsibly
- Inspect the fuel tank for cracks or corrosion;
- Inspect boat motor/s, fuel lines, manual priming bulbs and all connections for damage, cracks or leaks; and
- Clean out or replace the fuel filter.



6. Health Safety and Environment (HSE)

Fuels and oils contain Polycyclic Aromatic Hydrocarbons (PAH), these are carcinogens, which have been proven to contribute to diseases in marine organisms and can also impact on human health.

The most frequently reported water pollution issues occurring within the marina and boating industry is from fuel and oil. Spills from refueling are of great concern due to the adverse effects on marine life and the amenity of aquatic environments. Small incremental discharges of hydrocarbons can add up to more significant impacts.

Health, Safety and Environmental (HSE) responsibilities are integral to the way Margate Marina do business. As a marine fuel distributor, we recognise the risks associated with operating in close proximity to the marine environment, particularly in respect to handling and storing hydrocarbons.

The Margate Marina is committed to:

- The use of processes, practices, techniques, materials, products, services or energy to avoid, reduce or control (separately or in combination) the creation, emission or discharge of any type of pollutant or waste, in order to reduce adverse environmental impacts;
- Conducting our operations in compliance with all relevant environmental regulations, licenses and legislation;
- Systematically identify and control environmental risks arising from our operations by establishing and maintaining an environmental management system in compliance with the ISO 14001 Environmental Management System Standard;
- Seek to continually improve our environmental performance by setting and reviewing environmental objectives and targets;
- Promoting a culture that encourages members, employees, contractors and clients to identify and promote health safety and environmental initiatives.; and
- Providing a safe environment for members, employees, contractors, stakeholders, customers and third parties who operate on our premises and or use our facilities.

To achieve these objectives, we will identify HSE risks arising from our activities and through the observance and promotion of our environmental policy, we aim to protect the environment we operate in and enhance the overall well-being of all our stakeholders, specifically, our members, employees, customers, and the wider community.

6.1 Risks and Controls

- RISK – Fuel blow back from nozzle.
- CONTROLS
 - Ensure nozzle trigger is gradually engaged to reach suitable flow
 - Place nozzle fully inside tank so spill cap on nozzle is flush with the surface of the fuel tank fill point
 - Refuelling process must always be monitored by a designated operator



- RISK - Ignition of fuel;
- CONTROLS
 - Never refuel a hot engine or tank connected to hot machinery;
 - Use fuel spill kit to mop up any spill
 - Never leave fuel nozzle unattended while refuelling is in process
 - Strictly NO naked flames, smoking or ignition sources are to be introduced in the vicinity of and to the vessel
 - Keep the nozzle in contact with the fill point / fuel tank to minimise the risk of static discharge.
 - Suitable fire suppression equipment must be readily available

- RISK - Muscular strain from dragging the hose to the fuel tank fills points;
- CONTROLS
 - Use hose wheel located at fuel depot bowser to reduce hose drag;
 - Operator to ensure hose is lined up properly before winding or dragging in (hose to be kept straight as possible or have second person assist if available);
 - Operator to be aware of correct body posture while dragging out and winding / dragging in hose;

- RISK - Fuel coming in contact with eyes and skin;
- CONTROLS
 - Eyewash station located in fuel depot and first aid room;
 - Freshwater supplies readily available – liberally flush affected area for minimum 15 mins;
 - Safety goggles and gloves provided at fuel depot;

- RISK - Reduction in vessel stability;
- CONTROLS
 - Check the fuel capacity of transfer tank to ensure weight is within capacity of vessel and associated machinery required to transfer; and
 - Transfer tank is to be stored low and secured in its designated storage spot on the deck to maintain stability.



Appendix 1 – Operation