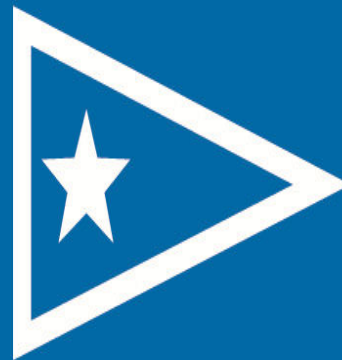


EAST FREMANTLE YACHT CLUB

Environmental Management
Plan

Issue No. 4
March 2011

VDM
ENVIRONMENTAL



EAST FREMANTLE
YACHT CLUB
(INC.)



DOCUMENT CONTROL AND FURTHER REVISION

This Environmental Management Plan (EMP) is a confidential document for the use of East Fremantle Yacht Club (EFYC). It is not to be modified or amended without the written consent of the EFYC General Manager.

All revisions are to be implemented only under the authority of the EFYC General Manager, in accordance with the procedure of monitoring, checking and management review outlined in the review process in the EMP. All suggestions for revision are to be recorded on the Amendment Register for assessment by the EFYC General Manager for endorsement by the Executive Committee.

This EMP is a living document which is designed to constantly evolve in response to changing knowledge, regulations and conditions. Any printed versions are uncontrolled. Therefore, a current copy can be assessed and/or obtained from the EFYC website (www.efyc.com.au).

Amendment Register

Amendment No.	Suggested Date	Section/Page	Amended By
1	January 2009	Endorsement	
2	January 2009	Sect 1.Background	
3	January 2009	Table 15 Weekly KPI's	
4	January 2009	Add Appendix F Weekly Site Check List	
5.	January 2009	Section 9.2 Training	
6	January 2009	Add Appendix G Refueling Operation	
7	April 2009	Add Sullage System	
8	April 2009	Appendix J	
9	April 2011	Issue 4	



Endorsement

The East Fremantle Yacht Club is conscious of the fact that it occupies an important area of the Swan River Waterway.

The Club recognizes its responsibilities to the Environment under regulations arising typically from Development Approvals, Lease Agreements, the Swan and Canning Rivers Management Act 2006, the Swan and Canning Rivers Management Regulations 2007, The Environmental Protection Act 1986 and the Contaminated Sites Act 2003.

The East Fremantle Yacht Club also considers that itself as a corporate entity and all of its Members are Stakeholders in fostering a culture which will preserve the Environment and Bio Diversity of the Swan and Canning Rivers Waterways.

The subject Environmental Management Plan is the formal framework that the Club has developed to monitor facilities and raise awareness of the necessity to eliminate any actions which could pose a risk to our Environment.

Club Commodore _____ date _____

General Manager _____ date _____

Acknowledgment of responsibility

Responsibility	Responsible Person	Signature of Responsible Person	Date
Overall running and direction of the EMP	General Manager		
Allocation of money where necessary	Executive Committee		
Training programs	General Manager		



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1.0 Background

The East Fremantle Yacht Club is aware that eliminating actions that risk the integrity of the Environment can only be accomplished when all individuals who are involved with the Club in any capacity whatsoever exercise “duty of care” with regard to the Environment.

The Club has provided and maintains Facilities, which when properly operating and properly operated, pose no harm to the Environment.

However, the Club recognises that, it is incumbent on the Club to provide instruction and training, where required, to ensure that Individuals take ownership of their actions when using Club Equipment and Facilities.

- The Club has reviewed its site operations to identify potential areas of failure in equipment and procedures and the consequences of the failures by conducting a basic Failure Modes and Effects Analysis. (FMEA). See EMP Issue No 3 April 2009.
- A weekly inspection of the Club Facilities has been instituted and a formal reporting sheet developed. (See Appendix F.)
- The Mooring and Storage Committee has taken ownership of a monthly jetty facilities report.
- Staff training is conducted both on a generic and specific needs basis and Environmental Issues are highlighted in Club Bulletins.

This Environmental Management Plan relates to environmental issues which have been identified as pertaining specifically to the EFYC. The issues have been evaluated with regard to relevant legislation and performance indicators such as the ANZECC standards, STR guidelines, etc. The EMP also highlights contingency actions which allow the EFYC to continue to operate. The EMP also facilitates the process of dealing with complaints and response to environmental incidents.

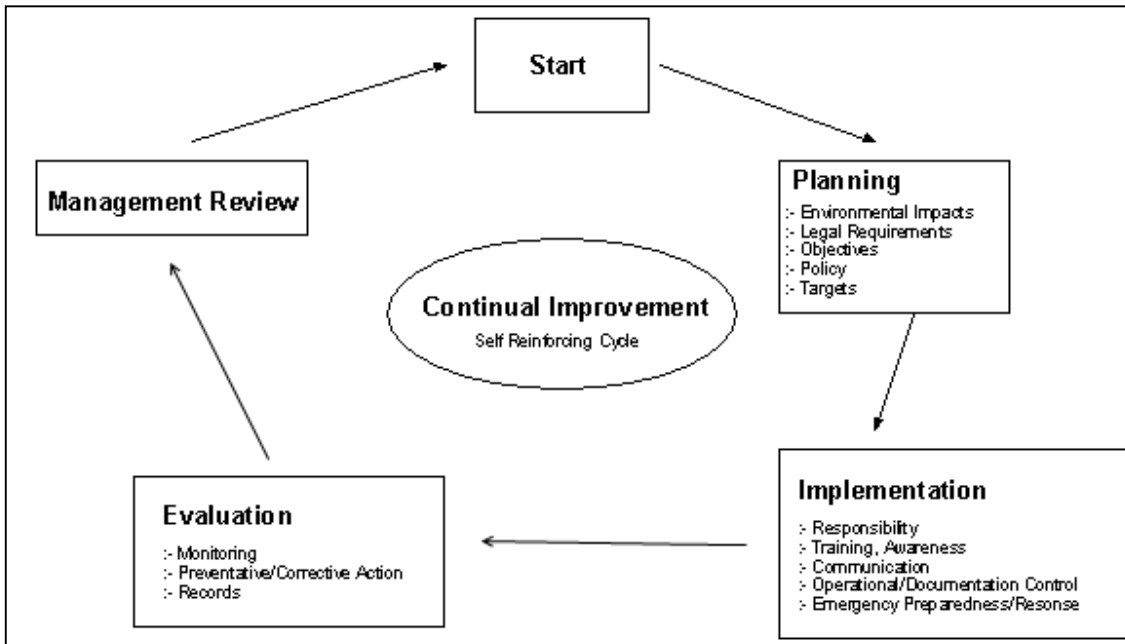


Figure 1:

Continual Improvement Process

Overall pollution prevention and waste reduction goals are approved by the Executive Committee; these are reviewed regularly and amended as necessary to achieve ongoing improvement in environmental management. The overall objective is to maintain a self reinforcing cycle where the management process and strategies are consistently refined and improved.

Considerable emphasis has been placed on Environmental Education and training to attain Best Environmental Management Practice.



2.0 Overview

Name: East Fremantle Yacht Club Inc

Contact Name: John Tissott,
General Manager

Trading As: East Fremantle Yacht Club Inc

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Fax: 08 9339 2424

Email: manager@efyc.com.au

Mailing Address:

PO Box 26,
Palmyra, WA, 6157

Street Address:

Base of Petra Street,
East Fremantle, WA, 6957

2.1 Description of Premises

The East Fremantle Yacht Club is located on Petra Street, East Fremantle. The site is situated on the shore of the Swan River, across the river from Point Roe Park and approximately 1km upstream of the Aquarama Marina, (32°01'45.16"S; 115°46'31.59"E).

2.2 Ecological Values

A search of the Department of the Environment and Conservation, Water, Heritage and the Arts, Environmental Protection and Biodiversity Conservation Act (EPBC, 2008) was undertaken to ascertain local ecological values (refer Table 1).

Table 1: EPBC reporting tool results for the EFYC

Species Common Name	Species Scientific Name	Status	Comments
Baudin's Black-Cockatoo,	<i>Calyptorhynchus baudinii</i>	Vulnerable	Species or species habitat likely to occur within area
Carnaby's Black-Cockatoo	<i>Calyptorhynchus latirostris</i>	Endangered	Species or species habitat likely to occur within area
Red-tailed Phascogale	<i>Phascogale calura</i>	Endangered	Species or species habitat likely to occur within area
Quokka	<i>Setonix brachyurus</i>	Vulnerable	Species or species habitat may occur within area



Species Common Name	Species Scientific Name	Status	Comments
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	Migratory	Species or species habitat likely to occur within area
Rainbow Bee-eater	<i>Merops ornatus</i>	Migratory	Species or species habitat may occur within area
Great Egret, White Egret	<i>Ardea alba</i>	Migratory	Species or species habitat may occur within area
Cattle Egret	<i>Ardea ibis</i>	Migratory	Species or species habitat may occur within area
Black Swan	<i>Cygnus Astratus</i>	Migratory	Species or species habitat may occur within area
Pelican	<i>Petecanus Conspicillatus</i>	Migratory	Species or species habitat may occur within area
Willy Wagtail	<i>Rhipidura Leucophrys</i>	Migratory	Species or species habitat may occur within area

There are no listed flora or vegetation communities at the EFYC (EPBC, 2008). Vegetation consists of grass lawn at the eastern aspect of the subject site. It seems therefore that the EFYC does not contain any ecological habitat of significance on site. Surrounding land uses are consistent with residential development, and as such, vegetation of any significance is contained with small pockets or highly degraded.

2.3 Hydrological / Geological Values

Groundwater levels are 4.5m below surface in an aquifer some 31 metres deep (Perth Groundwater Atlas, 2003). The salinity of ground water varies between 1,500 and 7,000 TDS in mg/L (brackish to saline). The surface geology type is indicated as 'Talama Limestone: predominantly calcarenite'. The area has a known risk of Acid Sulfate Soils. Contour maps show the ground slopes from 3.0m in the south to 0.4m in the north (Perth Ground Water Atlas, 2003).

2.4 Social Values

The area surrounding and including the EFYC is currently zoned under the MRS as Parks and Recreation. A search of the Department of Indigenous Affairs Aboriginal Heritage Inquiry System



indicated that the Swan River is listed as a registered site of Mythological significance (Aboriginal Heritage Inquiry System, 2008).

2.5 Significant infrastructure

An aerial photograph detailing infrastructure at EFYC may be found in Appendix A.

2.5.1 Fuel Jetty/ Fuel Storage

Diesel and premium unleaded petrol is dispensed at the refueling jetty (refer Appendix B).

Diesel and petrol hydrocarbons are stored in underground tanks.

Delivery of fuels is carried out by oil company tankers with certified tanker drivers.

Waste oil is collected and removed from site by a licensed contractor.

2.5.2 Vessel Accommodation

The club currently provides used for the mooring of diesel, petrol and sail-powered vessels, in fixed pens accommodating 132 EFYC members vessels in total. – Plus moorings 25.

2.5.3 Club House Waste

Waste grease and cooking oils are collected in grease traps which are emptied by a contractor. Sewerage from the yacht club is collected at a small sewerage tank and pump station underneath the club house. This pump station connects with the Water Corporation's local sewerage system.

2.5.4 Boat Maintenance

The marina has no hardstand maintenance or slipway facilities and only provides fixed pen & mooring facilities for members vessels. EFYC has agreements for hardstand/slipway works to be carried out at the South of Perth and Swan Yacht clubs.

In-pen vessel maintenance is defined in the pen holders agreement. Oil changes utilising the waste oil facility are allowed. A 'soft' clean only with a sponge to the underside of vessels is allowed. Spraying paint or other is not permitted within the land lease and/or the river reserve.



2.5.5 EFYC Facilities Summary

EFYC provides the following facilities:

- Diesel and ULP Refueling Jetty.
- Dry storage facilities.
- Pens for 132 vessels
- Swing Moorings for 25 vessels



3.0 Operational Objectives of the Environmental Management Plan

The aim is to focus on world best practice with performance criteria to integrate management practices to prevent or minimise environmental harm in line with the principles of ecologically sustainable development.

The objective of the EMP is to seek continual improvement by:

- Monitoring potential contamination issues.
- Following management and operational strategies for preventing and controlling pollution that may result from these issues.
- Implementing a system of ongoing audits to ensure the development and implementation of environmental management strategies in the future.

The key to achieving these objectives centres on waste control (prevention and minimisation), recycling, treatment and disposal.



4.0 Environmental Policy

The Executive Committee adopted and endorsed the following Environmental Policy (Current for this revision):

The East Fremantle Yacht Club (EFYC) is committed to:

- Minimise environmental harm and environmental degradation.
- Operate all activities in compliance with any statutory requirements for protecting the environmental values of air, noise and water.
- Conduct the operation of its refueling jetty, marina and boat maintaining in a manner consistent with environmentally sustainable development.
- Comply with all relevant Workplace Health and Safety requirements.
- Minimise waste generation by using cleaner operational techniques and the reuse and recycling of wastes.
- Ensure activities are in the public interest.
- Continuous improvement.
- Provide adequate human and financial resources to effectively implement the EMP.
- Achieve best practice environmental management in design and implementation of the EMP.
- Ensure staff, members and contractors are suitably informed and trained to implement the EMP. This is ongoing through induction workshops, specialized training and information provided in the EFYC newsletter.
- Monitor and audit the performance of the Club's EMP.
- Conforming with to the principles and objectives of Ecologically Sustainable Development. ‘

Signed:..... **EFYC General Manager** **Date**.....

Signed:..... **Commodore** **Date**.....

Signed:..... **Environmental Officer** **Date**.....



5.0 Environmental Responsibility and Planning

5.1 Legal Responsibilities

The *Environmental Protection Act 1986* was introduced to improve environmental protection, clarify the administrative process and highlight responsibilities and therefore accountability for environmental protection.

EFYC policy is to comply with the Act including its general environmental duty of care provisions ensuring activity which causes, or is likely to cause environmental harm, is not undertaken unless all reasonable and practical measures to prevent or minimise the harm have been implemented.

In addition to the EPA Act, the EFYC identifies its responsibilities under the following:

- Development approvals.
- Lease agreements.
- *Swan Canning Rivers Management Act 2006.*
- *Swan Canning Rivers Management Regulations 2007*
- *Contaminated Sites Act 2003.*



6.0 Risk Assessment and Priority Setting

The Environmental Protection Act (1986) defines environmental value as:

- “A quality of physical characteristics of the environment that is conducive to ecological health or public amenity or safety”.
- “A quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation”.

6.1 Key Environmental Values:

The key environmental value for EFYC is water quality. This value is impacted upon by:

- Waste management.
- Sullage, sewerage, waste oil.
- Hydrocarbon spills, antifouling paints, chemicals, diesel, petrol.
- Air quality – dust and odor.
- Noise.
- Local / visual impact.

6.2 Risk Management

A risk management and priority setting analysis was used to determine the action and implementation strategy/timing of environmental management measures outlined in sections 6, 7 and 8. This four step process is based on risk assessment methodologies on similar yacht clubs in the eastern states.

The main objectives of this risk assessment was to provide a simple, easy to use risk assessment prioritisation system that can be utilized by club members and management. Environmental consequences and probabilities were as visual impacts of the potential risks.

The risk assessment process used to develop this Environmental Plan is detailed in Environmental Plan Issue No 3 January 2009.



7.0 AREAS OF CONCERN

Areas of Concern identified for action by the original study (see EMP Issue No 3 April 2009) to prevent pollution of the Swan River were as follows.

1. Liquid Waste
2. Refuelling and Fuel Storage
3. Chemical Control
4. Boat Maintenance
5. Noise emanating from Club activities
6. Site Maintenance

7.1 Liquid Waste

The initial EMP Risk Assessment was grouped under the following sub headings:

- Pollution of the river by bilge water.
Table 2 shows the strategy options which are now in place.
- Pollution of the river by sewerage/sullage.
Table 3 shows the strategy options which are now in place.
- Pollution of Environment by contaminated storm water run off
Table 4 shows the strategy options which are now in place.



Risk		Table 2: Pollution of the river from bilge water	
Objective		No hydrocarbons discharged into river via bilge water	
Strategy	Structures		Suitable bilge pillow waste disposal facilities provided
Options	Equipment	√	Mandatory requirement for oil separation/absorption pillow in bilges of vessels with automatic bilge pumps
		√	Absorption/separation pillow readily available (at recommended retailer or handler)
	Practices	√	Provide training to members/staff/ contractors on impact, use and options for bilges pillows
	Contingency plan	√	Non compliance of members/staff/ contractors results in disciplinary action
	Reporting incidents	√	Non compliance of members/staff/ contractors to be reported to the EFYC General Manager.



Risk		Table 3: Pollution of the river from sewerage / sullage	
Objective		No waste water discharged into river	
Strategy	Structures		Suitable system in place to handle waste water from vessels and Club house
Options	Equipment	√	Sewerage from clubhouse pumped into local sewerage system, comprises 3 float switches with 2 pumps working in rotation. System is alarmed to notify of staff of failure. Sewerage pumped from boats through sullage system into clubhouse sewerage system.
	Practices	√	Provide training to relevant staff on preferred procedures and BMP
	Contingency plan	√	Non compliance of members/staff/ contractors results in disciplinary action
	Reporting incidents	√	Non compliance of members/staff/ contractors to be reported to the EFYC General Manager.



Risk		Table 4: Pollution of the environment from contaminated stormwater runoff	
Objective		Containment and treatment of all contaminated runoff	
Strategy Options	Structures		A settling pit is in operation to collect silt from storm water run off. Rain water tanks to be installed during part B of the club redevelopment.
	Reporting incidents	√	All incidents reported to the EFYC General Manager.



7.2 Refuelling and Fuel Storage

The Club is continuously aware that the loss of hydrocarbons into the environment has the potential to cause considerable environmental damage. Also, the presence of hydrocarbons in water is toxic to aquatic ecosystems whilst a film on the surface of water creates a visual concern. Relatively small amounts of hydrocarbons spread and cover/contaminate large areas.

Methods to limit Hydrocarbon in the environment at present in place include:

- Regular testing of refueling equipment to ensure it is working properly.
- Fuel tanks are filled and maintained by appropriate qualified professionals employed by the Fuel Supplier.
- Fuel Spill kit to contain accidental spillage.
- Educating and training of members/staff:
 - In the proper use of refueling equipment.
 - In managing bilge water.
 - In best management practices for engine cleaning/maintenance.



Risk		Table 5: Hydrocarbon contamination from spillage during refuelling	
Objective		No spillage of hydrocarbons during refueling	
Strategy Options	Structures	√	Bowsers are fitted with variable rate delivery nozzles
		√	Bowsers are fitted with auto-shut off delivery nozzles
		√	All vessel to have fuel/air separators inline devices that prevent fuel escaping from vents during refueling
	Equipment	√	Emergency response equipment (booms, mats etc) is located in close proximity to refueling facility.
		√	Procedures on refueling are circulated to all members.
		√	Training is provided to members/clients/contractors on preferred procedures and Emergency Response Plan
	Contingency plan	√	Emergency Response Plan is available
Reporting incidents	√	All hydrocarbon (Fuel and Oil) spills are reported to the General Manager during office hours. If the General Manager is not available then spill incidents are to be reported directly to the Swan River Trust. During office hours – 9278 0981 or after hours – 0419 192 845	

Members have been instructed to report any “noticeable” hydrocarbon slicks observed within or immediately adjacent to the Club Facilities regardless of whether the spill source has been identified. A “noticeable” spill has been defined as any visible sheen or slick of fuel (petrol or diesel) covering an area of more than 100 square metres (10 x 10m or equivalent).

If the “noticeable” spill is heavy dark coloured oil over 16 square metres it is also reportable.

This procedure has been advised to Club Members through this EMP and the Club Magazine.



Risk		Table 6: Hydrocarbon contamination from storage tanks and associated pipe works	
Objective		No loss of hydrocarbons to the environment from storage tanks and associated pipe works	
Strategy Options	Structures	√	All fuel storage and associated pipe works comply with relevant Department of Minerals and Energy and Department of Environmental Protection guidelines and regulations, Swan River Trust Policy and Standards Australia AS 1940-1993 for the storage and handling of flammable and combustible liquids.
		√	All bunding and containment are impervious
		√	Tanks are located as close as possible to point of delivery of fuel to. Minimise likelihood of tank and associated pipe works failure.
	Equipment	√	Emergency response equipment (Booms, mats etc) is in place
	Practices	√	A maintenance program for fuel tanks and associated pipe works is administered by the Fuel Company
		√	Training is provided to relevant staff on preferred procedures and Emergency Response Plan
	Contingency plan	√	Emergency response plan is available
	Reporting incidents	√	All fuel spill incidents which can not be controlled and managed by EFYC are reported to the relevant agencies, as per Table 6
		√	All spill incidents are reported to the EFYC General Manager, as per Table 6



7.3 Chemical Control

The storage, handling and disposal of chemicals are managed by the implementation of appropriate controls:

- Chemicals are kept in a secure area and each container labeled clearly to make disposal and possible recycling easier.
- A register of chemicals is maintained with Material Safety Data Sheets (MSDS) for each chemical.
- Chemicals are stored, handled and disposed of in strict accordance with the specifications of manufacturers MSDS.
- Areas used for storage of liquid materials are bunded to contain spills.
- Recycling of chemicals such as oils and solvents is enforced with remaining unwanted chemicals disposed of at an appropriately licensed facility.
- Non-regulated waste is disposed of via normal waste collections.
- Appropriate legislative requirements in relation to the use and storage of chemicals are adhered to in the design and operation of the marine area.



Risk	<u>Table 7: Contamination of environment from stored hazardous and dangerous goods</u>	
Objective	No loss of hazardous goods to the environment or unacceptable exposure of people resulting from the storage and use of hazardous and dangerous chemicals.	
Strategy Options	Structures	All areas where hazardous and dangerous chemicals are stored and used comply with current Department of Minerals and Energy and Department of Environmental Protection regulations and standards and guidelines where applicable.
	Equipment	√ A chemical spill station with absorbent clean-up material is provided
	Practices	√ A inventory of all hazardous and dangerous chemicals on the premises, including those held by ground-people, contactors and sub-lessees is in place. All Materials Safety Data Sheets (MSDS) for chemicals are available on site.
		√ Inspections are conducted to quantify the level of danger (hazard) presented by the flammable, combustible or environmental hazardous material.
	Reporting incidents	√ The Club provides appropriate first aid, first line fire fighting and emergency spill equipment
		√ All significant spill incidents are reported to the relevant agencies. Appropriate phone numbers are displayed and advertised in the Nautical News. See Table 6



		√	Results of the Marine Facility audits are reported to the Club Executive Committee annually, and all incidents immediately following investigation. Reports include findings, remedial actions necessary, costing, priority and timing or required works.
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7.4 Boat Maintenance

EFYC has no hardstand maintenance facilities. However, incorrect in-water vessel maintenance has the ability to cause severe environmental harm.

Risk		Table 8: Contamination of environment due to cleaning of vessels in pen areas	
Objective		Prevent contamination of river by cleaning agent	
Strategy	Structures		
Options	Practices	√	No cleaning of vessels using cleaning agents in river is allowed
	Contingency plan	√	Non compliance of members/staff/ contractors results in disciplinary action
	Reporting incidents	√	Non compliance of members/ contractors to be reported to the EFYC Club General Manager.



7.5 Noise Control

Owing to the location of EFYC, noise is not considered a cause of concern.

Risk		<u>Table 9: Noise pollution causing a nuisance and/or endangering the health of neighbours and members/clients/contractors</u>	
Objective		Reduce all noise pollution such that no health risk is posed and no complaints are received.	
Strategy	Structures		
Options	Practices	√	All noise generated by members/staff/clients/contractors to comply with Environmental Protection (noise) Regulations 1997.
		√	Locate activities that are most likely to generate unwelcome noise as far as possible from neighbours.
	Contingency plan	√	If noise complaints received, the Club works with Local Government Environmental Health Officer and complainant to negotiate acceptable levels and times for the activity to continue.
	Reporting incidents	√	Non compliance of members/staff/ contractors to be reported to Club General Manager



7.6 Site Maintenance

The site has limited unsealed surfaces. These surfaces, particularly those near the launch area are maintained to limit adverse environmental effects.

Risk			<u>Table 10: contamination of river from fertiliser, herbicides, pesticides, green wastes and erosion.</u>
Objective			Reduce opportunity for pollutants to run into the river from the grounds. Protect the river bank.
Strategy Options	Structures	√	The lawns adjacent to the clubhouse are maintained by the City of Melville.



8.0 Training and Education

8.1 EFYC Policy Statement

EFYC conducts education of staff and members involved with the operations of EFYC Marine Facility and Club House and the Refueling Facility as required. This education is a critical component of maintaining a safe, environmentally friendly and economically feasible facility that has a good 'public image'.

Any outside contractor violating the Environmental Guidelines, may be asked to pay for damages, and/or have his/her privileges terminated.

Notice to this effect is given to all individuals using EFYC facilities. All new Members are advised of this during induction and through publications.

8.2 Training and Education Topics

- Environmental Policy and Statement.
- Environmental awareness and responsibility (to be included in induction).
- Fuel Facility Operating Instructions for refueling Vessels. See Appendix G
- Operation of the sullage system.
- Awareness of a commitment to environmental management.
- Instruction on the Club's EMP.
- Briefing on environmental management objectives and targets and updating of these objectives and targets as the EMP is implemented and evolves.
- A general responsibility to encourage others to adopt environmentally friendly and best practices.
- Organisational structure and responsibilities and the role this plays in the effective management of environmental issues.
- The need for all staff and Members to be environmentally aware, provide feedback and suggest new ideas.
- Awareness of Club rules.
- Awareness of the Swan River Trust Regulations.
- General awareness of environmental impacts and the pollution potential of products.



8.3 Communication

- Copies of EFYC Environmental Policy and Statement are available at the EFYC Office and on the website to ensure continuing awareness and commitment to environmental responsibility.
- Signs indicating that swimming, diving and fishing is prohibited in the river lease area.
- Newsletters regarding relevant boating and environmental issues to members and to staff.

8.4 Personal Safety

Safety topics are included as part of the induction of staff and members with updates in the bi-monthly Club Magazine:

- Safety topics are a permanent agenda item for discussion at the weekly staff meetings.
- General safety procedures (use of Equipment).
- Location of first aid kits.
- Persons to contact with first aid training. (Contact lists, first aid training).
- Storage, handling and disposal of hazardous materials, their impacts and safe use (MSDS Material Safety Data Sheets).

8.5 Risk Minimisation

- Knowledge of control procedures for day-to-day operational activities to minimise environmental impacts.
- Locations of Electrical, Plumbing and Storage Tanks are arranged to prevent unnecessary accidental damage and facilitate rapid repairs.
- Correct usage of the Refueling Facility to minimise spillages.
- Correct techniques for containing and cleaning spills.

8.6 Reporting and Documentation

All staff are trained to respond to events that require action as per table 12 below.

Table 11: Event and action requirement for responsible persons

Event significance	Action required	Person responsible
Insignificant	Verbal report to General Manager.	Staff member involved/witnessing the event.



Minor	Verbal report to General Manager.	Staff member involved / witnessing the event.
Moderate	Written report to General Manager.	Staff member involved / witnessing the event. Ultimately General Manager is responsible to following up upon being made aware of situation.
Major	Written report to General Manager and Swan River Trust.	Staff member involved / witnessing the event. Ultimately General Manager is responsible to following up upon being made aware of situation.
Catastrophic	Written report to General Manager and Swan River Trust.	Staff member involved / witnessing the event. Ultimately General Manager is responsible to following up upon being made aware of situation.

Training and reporting documentation are to be prepared as per table 13 below.

Table 12: Reporting and documentation requirements

Document	Review	Person responsible
Induction documentation	Yearly	General Manager to QA, may delegate.
OHS Training documentation	Yearly or as necessary	General Manager to QA, may delegate.
Environmental safety Training	Yearly or as necessary	General Manager to QA, may delegate.
Yearly OHS incident report	Yearly	General Manager.
Yearly Environmental Incident report	Yearly	General Manager.

8.7 Emergencies

A control hierarchy has been established to facilitate an adaptable responsive approach to action during an emergency. Inducted members will have a key allowing access to emergency response



equipment such as spill kits. Key staff personnel are to be trained to deal with emergency situations. Management is to be informed at all times of the status of the emergency and to control emergency response until professional emergency response personnel arrive on site if needed.

- Fire fighting Procedures and Roles.
- Emergency Procedures.
- Emergency Response Procedures – contingency plan for non-routine situations.
- Location of the Emergency Procedures Manual.
- Location of Storm Water Drains to manage sudden rainfall events or spillages.
- Location of current lists of emergency phone numbers.
- Location of details of Emergencies Response Procedures.



8.8 Training Performance Indicators and Timeframes

The following table outlines the preferred method for assessing the effectiveness of implemented educational programs. Further monitoring and measurement is provided as section 11 of this document.

Table 13: Training performance indicators and timeframes

Action	How	Timeframe	Person Responsible
Review effectiveness of personal safety education program.	Review accidents reports from the previous year.	Yearly	General Manager to delegate.
Review effectiveness of Environmental safety education program.	Correlate results from ongoing field monitoring and review spill/environmental damage reports from previous year.	Yearly	General Manager to delegate.



9.0 IMPLEMENTATION

The responsibility for implementing the adopted strategies of this Environmental Management Plan in a timely fashion rests with the EFYC General Manager under the direction of the Executive Committee.

Implementation of the above stated strategies will require the development of the following tools:

- Preferred procedures manual.
- Emergency response plan.
- Training program and reporting procedures.

The following tables outline the committed content of each.

Environmental Management Preferred Procedures Manual	The preferred procedures manual of the East Fremantle Yacht Club will include the following topics	
	YES	NO
Filling of bulk fuel tanks		√
Refuelling of vessels	√	
In Pen maintenance work to vessels (e.g., preferred maintenance methods and chemicals)	√	
Cleaning of vessels (including preferred chemicals, safety and environmental information)	√	

Emergency Response Plan	The emergency response plan the East Fremantle Yacht Club will include the following topics	
	YES	NO
Hydrocarbon contamination from storage tanks and associated pipework	√	
Spillage of hydrocarbon during refuelling	√	
Contamination of stored hazardous/dangerous goods.	√	



Environmental Management Reporting Protocol	The reporting protocol for the East Fremantle Yacht Club will consider how each of the following issues will be dealt with			
	Internal reporting		External reporting	
	YES	NO	YES	NO
Hydrocarbons from storage tanks and pipe work	√		√	
Hydrocarbons spilled during refuelling of vessels which can be controlled and cleaned up by Yacht Club.	√			
Hydrocarbons spilled during refuelling of vessels which cant be controlled and cleaned up by Yacht Club	√			
Non Compliance with use of bilge pillows	√		√	
Non compliance with vessel cleaning procedures	√			
Use of banned antifouling agents	√		√	
Non compliance with noise generation policy	√			
Contamination from stored hazardous/dangerous goods	√			

Environmental Management Training program	The training program for the East Fremantle Yacht Club will include the following topics					
	Members		Staff		Contractors	
	YES	NO	YES	NO	YES	NO
Preferred procedures for filling of bulk fuel tanks		√		√		√
Preferred procedures for refueling of vessels	√		√	√		√
Impact, use and options for bilge pillows	√			√	√	
Preferred procedures for vessel maintenance	√			√	√	
Preferred procedures for vessel cleaning	√			√	√	
Environmental consequences of antifouling	√		√		√	
Emergency response plan	√		√			
etc						



10.0 Monitoring and Measurement

Monitoring and measurement is an integral part of environmental management because it enables environmental performance to be measured against the objectives and targets described in the Environmental Management Program.

EFYC will assist where possible in any Environmental Testing carried out by the Swan River Trust or Government or Statutory Authorities.

Monitoring is undertaken on an ongoing basis in order to assess the effectiveness of environmental management measures and as part of statutory compliance. Previous investigations, including a *Detailed Site Investigation* (Belleng, 2007) and the *Tributyltin and Heavy Metal Survey in the Swan River: Swan Yacht Club Sediment and Mussel Tissue Quality* (Oceanica, 2007), undertook water and sediment sampling from storm water outlets and beneath the slipway area. Based on these investigations, a detailed sampling and analysis plan (SAP) is to be undertaken for EFYC. At the time of writing this report, the SAP had yet to be undertaken, and as such, this section of the document was inconclusive. The SAP is proposed to provide a detailed, ongoing water and sediment sampling and target values (based on the Swan Canning Cleanup Program (SCCP) and ANZECC guidelines) that shall be incorporated into this document.



Table 14 outlines the key performance indicators are to be undertaken by EFYC.

Table 14: Key Performance Indicators

Performance Indicator	Frequency	Responsibility	Reference
Environmental Training	Biannual for new members and staff	EFYC General Manager / Environmental Officer	As part of the induction process.
Site Inspection	Weekly	EFYC General Manager	Site inspection sheet provided as Appendix F.
Environmental Incidents	As required	EFYC General Manager / Environmental Officer	Environmental Incident forms are provided as Appendix X.
Fuel Tanks	Water testing biannual	EFYC General Manager	Water testing results to be compared against ANZECC guidelines to ensure performance objectives are met.
Fuel Tanks	Annual Pressure Testing	EFYC General Manager	Requirement of the installation of the fuel tanks.
Review of training programs/documentation	Annual	EFYC General Manager	Refer section 9
Review Environmental Management Plan documentation	Annual	EFYC General Manager / Environmental Officer	Refer section 11.2 In accordance with lease agreement

All results are to be collated and provided to the SRT on an annual basis.

These key performance indicators, as well as the target values, should be identified in consultation with the Swan River Trust.

10.1 Review and Improvement

Annual reviews by the Executive Committee will be used to assist the EFYC to address strategy options within the committed timeframe.

An annual review will be carried out by the Executive Committee. This review will consider the level of completion and success of selected strategy. The environmental risks posed will be reviewed and amended as necessary. Strategy options for managing these risks will be considered and committed to within an agreed timeframe.



10.2 EMP Revision

To successfully measure the progress of the EMP, a set of site/activity specific indicators needs to be developed. Indicators are most effective when they are measurable for comparative purposes.

Measurement of the progress of the EMP	Time frame
Regular internal audits to keep track of the progress of the Environmental Management Plan implementation.	Annual
Annual audit as per the draft lease agreement with the Swan River Trust	Annual
Number of reported incidents (etc spills and non compliance issues).	Ongoing
Percentage of members/staff/contractors who have participated in the Environmental Management Training Program.	Ongoing

Collection of measurements will be the responsibility of the EFYC General Manager under the direction of the Executive Committee. EMP measurements will be presented to the Executive Committee annually.

10.3 Reporting of Accidents and Incidents

The Swan River Trust (SRT) requires that all personnel, operators and contractors report accidents and incidents to the SRT. This includes any incident that either harms the environment or has the potential to harm the environment, including near misses (Refer Appendix D for Accident / Incident Reporting and Investigation).

The EFYC General Manager will retain a copy of all accident and incident forms and, based on the reporting and documenting procedures outlined in section 9.6 of this report, advise the appropriate agencies and personnel. A summation of all accident and incident forms will be provided to the Swan River Trust on an annual basis.

10.4 Complaints Procedure

The process of response to complaints is as follows:

- Report complaint to General Manager.
- Investigation by General Manager.



- General Manager will advise the Swan River Trust of complaint.
- EFYC will address incident/trigger with the EMP.
- Return findings to whoever made the complaint.

The above is to be recorded in a complaints register and managed by the General Manager.



11.0 References

ANZECC, (1997). "Best Practice Guidelines for Waste Reception Facilities at Ports, Marinas and Boat Harbours in Australia and New Zealand".

Belleng VDM (2007), "East Fremantle Yacht Club: Detailed Site Investigation"

Belleng VDM (2007), "East Fremantle Yacht Club: Preliminary Site Investigation"

Best Practice Guidelines for the Provision of Waste Reception Facilities at Ports, Marinas and Boat Harbours in Australia and New Zealand, Australian and New Zealand Environment and Conservation Council, 1997

Department of Indigenous Affairs. Aboriginal Heritage Sites – Policies and Procedures.
www.dia.wa.gov.au/Heritage/heritage_policiesprocs.aspx

Department of the Environment and Heritage (DEH) (2000) *EPBC Act Administrative Guidelines on Significance* [Internet] Available from:
<http://www.deh.gov.au/epbc/policy/administrative/>

Draft Boating Management Strategy for the Swan and Canning Rivers, Swan River Trust, (2008).

Guidelines for the Preparation of an Emergency Plan and Manifests, Department of Industry and Resources, 2003.

Integrated Environmental Management System (IEMS) Southport Yacht Club Inc. Southport Yacht Club, 2005.

Oceanica (2007), "Tributyltin and Heavy Metal Survey in the Swan River: Swan Yacht Club Sediment and Mussel Tissue Quality"

Perth Online Ground Water Atlas, 2003, available from:
<http://apostle.environment.wa.gov.au/idelve/gwa/index.jsp>



Appendix A







Appendix B





Appendix C





Appendix D





Appendix E



Proposed SAP not available



Appendix F

Weekly Site Inspection Checklist - / /

Item	Checked	Comments
Car Park Pens		



Fuel Facility		
Dispensers		
Pumpmate & Dispenser Displays OK		
Dispenser Sumps		
Emergency Cut-off & Fill Sumps		
Sullage Unit		
D Jetty Pens		
Large Waste Bins		
Waste Oil Facility		
Waste level and condition		
Western Car park Pens		
E Jetty Pens		
F Jetty Pens		
Mooring Area – scan		
Rescue 2		
Sewerage Pit		
C Jetty Pens		
B Jetty Pens		
A Jetty Pens & D/Boat Decking		
Rescue Boat Cage		
Check Fuel & Oil Storage		
Chemical Storage Area		
Exterior of clubhouse		
Interior of Clubhouse		

Notes

- 1 – Any outstanding items from previous checklist carried forward
 - 2 – Site Check – Fire hydrants & extinguishers and any hazards
 - 3 – Jetty Checks – Power leads, fire reels & extinguishers and any hazards
- Inspection performed by _____ On ___ / ___ / ___

Actioned and filed on ___ / ___ / ___

