

Environment Management Plan Manual

Aligned with AS/NZS ISO 14001:2004



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EMP Policies, Procedures and Plans

Our Environmental Management Plan (EMP) is defined by the below core documentation, which may be held as hard copy or in electronic format:

- EMP Manual (current document)
- Key Stakeholder Briefing – Environmental Management
- Work Health, Safety and Environmental (WHSE) Policy
- Environmental Training Register and Matrix
- Environmental Induction
- WHSE Hazard Identification and Risk Management Framework
- Environmental Action Plans
- Control of Substances Hazardous to Health (COSHH) Procedure
- Waste Management Procedure
- Environmental Spill Response Protocols.

Reference Documentation

The following is a short-list of documents that should be referred to in conjunction with our EMP, and related policies and procedures:

Background Information

- Site map and drainage plans
- Staff and personnel files (includes employee training records)
- Quality Management System (QMS) documentation
- Ecomaps developed by Wirra Wirra.

Energy (i.e. electricity and fuels) and Emissions Related Data and Records

- Electricity monitoring data and records
- Gas monitoring data and records
- Energy audit (Level 2) (undertaken by EnvironArc dated July 2012)
- Draft Energy Action Plan (internal document developed by Wirra Wirra in late-2012).

Compliance

- Waste transfer documentation
- Wirra Wirra environmental license (EPA 13068)
- Environmental compliance guidelines for the South Australian Wine Industry (SAWIA)
- Environmental contingency plan
- National Pollutant Inventory (NPI) report (December 2012)
- Australian Packaging Covenant (APC) report (December 2011)
- Draft environmental management plan guidelines for South Australian Wineries (November 2012).

Work Health and Safety (WHS and OHS)

- Accident incident reporting procedure
- Asbestos register
- Substance management protocols and Safety Data Sheets (SDS) Register
- Workplace inspection checklist
- SDS and related storage and handling compliance documentation
- Job Safety and Environmental Analyses (JSEA).

Waste Data and Records

- Wirra Wirra recycling and waste collection contacts
- Waste contractor licenses, documentation and records
- Waste and WWTP monitoring data and records
- Waste process documentation
- Waste Water Treatment Plant (WWTP):
 - WWTP SOPs and work instructions
 - WWTP emergency response framework.

Biodiversity Management

- Wirra Wirra land management plan.

Other

- Computer back up process
- Freshcare environmental code – winery, Entwine Australia
- Legionella monitoring and management program
- Warm water and cooling water systems related documentation.

1 Introduction

1.1 General Requirements

The purpose of this manual is to define our Environmental Management Plan (EMP).

1.2 Scope

Our EMP enables our organisation to implement our Work Health Safety and Environmental (WHSE) policy, Environment and Sustainability program and related objectives, taking into account legal and other requirements to which our organisation subscribes. Our EMP applies to those environmental issues that our organisation can control and influence, and extends to primarily cover our Winery operations (and related products).

1.3 Confidentiality of Environment Manual

The environmental manual which encompasses our EMP is for circulation within the company only. Neither the manual, nor extracts from it, may be passed or copied to other companies or persons without the explicit approval of our Environmental Coordinator and our Managing Director (MD).

1.4 Internal Distribution

The master copy of the environmental manual and procedures will be held in electronic format on Wirra Wirra's system.

1.5 System Responsibility

The Environmental Coordinator will be responsible for coordinating our EMP, and will report directly to the Senior Wine Maker, who will in turn report to the Managing Director regarding our EMP's performance.

The Environmental Coordinator in addition to managers and team leaders are responsible for notifying our employees and other interested parties of any changes to the manual or procedures.

1.6 Amendment Procedure

The master copy of the environmental manual will be updated by the Environmental Coordinator as necessary.

1.7 Definitions

APC:	Australian Packaging Covenant
Australian Standard:	A document issued by Standards Australia that provides guidance and/or technical information on a specific topic. Requirements within relevant standards are mandatory if they are referenced in an Act or Regulation.
AS/NZS 3598:2000 (Level 2 audit):	Refers to the Australian Standard for energy auditing. There are three levels of energy audits (levels 1, 2 and 3). A Level 2 energy audit describes a preliminary assessment of energy use at a site, and includes: <ul style="list-style-type: none">- the tasks specified for a Level 1 audit. i.e. walk-through assessment- a broad calculation of energy of the main energy end uses for example, lighting and equipment. In the absence of separate metering, figures are estimated from plant ratings and operating hours, using appropriate assumptions- identification of measures to achieve 'predicted' savings capital costs and savings estimates to an accuracy of plus or minus 20%.
AS/NZS ISO 14001:2004:	International standard for EMP

BLMWP:	Biodiversity and Land Management Work Program
Code of Practice:	A document issued by a relevant authority that provides guidance for the conduct of a specific task. Codes of Practice must be complied with when referenced in an Act or Regulation.
CFO:	Chief Financial Officer
Continual Improvement:	Recurring process of enhancing the EMP in order to achieve improvements in overall environmental performance consistent with Wirra Wirra's WHSE Policy.
Corrective Action:	Action to eliminate the cause of a detected non-conformity.
COSHH:	Control of Substances Hazardous to Health
Documents:	Documents (electronic or paper) that are part of Wirra Wirra's EMP.
EIR:	Environmental Spill Response
E-KPIs:	Environmental Key Performance Indicators
Emergencies:	A significant event which threatens life, property or the environment; including fire, explosion, spills (to land, water, etc), gas leaks (explosives, flammable, toxic), off-site events (road accidents), civil disturbances (riots or bomb threats), natural disasters (earth quake, cyclones, bush fires, floods, mud slides, tidal waves, etc.), terrorist attacks, and chemical, biological and radiological emergencies.
EMP Manual:	Framework document of an Environmental Management Plan. The EMP Manual should define the scope of the EMP, and how the EMP will fulfil selected requirements of AS/NZS ISO 14001:2004.
EMR:	Environmental Management Review
Energy Audit:	An inspection of the energy flows (inputs and end uses) within a defined area to identify areas where energy can be conserved without affecting the outputs. Also refer to definition for AS/NZS 3598:2000 (Level 2 audit).
Environment:	The surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation.
Environmental Aspect:	Element of Wirra Wirra's activities or products or services that can interact with the environment.
Environmental Impact:	Any change to the environment, whether positive or negative, resulting from the processes, activities or business operations of Wirra Wirra.
Environmental License:	Section 36 of the Environment Protection Act 1993 (SA) establishes the requirement to have a licence to carry out prescribed activities of environmental significance. Such prescribed activities are listed under Schedule 1, and include operating a winery.
Environmental Management Plan (EMP):	The EMP is a defined set of documents which enable an organisation to develop and implement a WHSE Policy and related objectives, taking into account legal and other requirements to which the organisation subscribes to, and information relating to significant environmental aspects. It applies to those environmental aspects that an organisation identifies, can control and over which it can be expected to have an influence. The scope of an EMP should extend to all operations, services and products of an organisation.

Environmental Nuisance:	Defined within Section 82 of the Environment Protection Act 1993 (SA), and occurs where: <ul style="list-style-type: none">- any adverse effect on an amenity value of an area that is caused by smoke, noise, dust, fumes or odour that unreasonably interferes with the enjoyment of the area by other people; or- any unsightly or offensive condition caused by waste.
Environmental Objective:	Overall environmental goal, consistent with the WHSE Policy, that an organisation sets itself to achieve.
EPA:	Environment Protection Authority
Ha:	Hectare: unit of area equivalent to 10,000 square meters.
Hazard:	A circumstance or situation with the potential to cause injury, illness, environmental harm, property damage or other loss.
Internal Environmental Auditor:	Person trained or assessed as having the competence to conduct internal environmental audits on behalf of our organisation.
Key Stakeholder:	Person and group concerned with or affected by the environmental performance of Wirra Wirra.
LMP:	Land Management Plan
Material Environmental Harm:	Defined within Section 80 of the Environment Protection Act 1993 (SA), and occurs where: <ul style="list-style-type: none">- actual or potential harm is caused to the health and safety of people; or- environmental nuisance is, or is potentially, of a high impact or on a wide scale; or- environmental harm (that is not trivial) is, or is potentially, caused; or- actual or potential damage is \$5,000 – \$50,000.
NATA:	National Association of Testing Authorities, Australia
NPI:	National Pollutant Inventory
Safety Data Sheet:	Refer to SDS.
SAWIA:	South Australian Wine Industry Association
SDS:	A Manufacturer-supplied document containing information regarding the properties of a particular substance, including procedures for handling or working with that substance in a safe manner, physical data (such as melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures.
NASSA	National Association for Australian Agriculture: Australia's leading organic certifier.
N/A:	Not applicable.
Occupational Health and Safety:	See OHS.
OHS:	See WHS.
Preventive Action:	Action to eliminate the cause of a potential non-conformity.

Prevention of Pollution:	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. Prevention of pollution can include source reduction or elimination, process, product or service changes, efficient use of resources, material and energy substitution, reuse, recovery, recycling, reclamation and treatment.
Procedure:	Specified way to carry out an activity or a process.
QMS:	Quality Management System
Record:	Data and information that relates to Wirra Wirra's EMP and/or its effectiveness and performance.
Risk Assessment:	Overall process of risk identification, analysis and evaluation.
Risk Control:	Specific measures which serve to reduce the likelihood and/or consequences of a specified event or circumstance.
Serious Environmental Harm:	Defined within Section 79 of the Environment Protection Act 1993 (SA), and occurs where: <ul style="list-style-type: none">- the actual or potential harm to health and safety of people is, or is potentially, of a high impact or on a wide scale; or- environmental harm is, or is potentially, of a high impact or on a wide scale; or- actual or potential damage exceeds \$50,000.
SHH:	Substances Hazardous to Health
SOP:	Standard Operating Procedure
Spill and Gas Leak:	Any uncontrolled release of a material that has the potential to cause harm to people or the environment as per the Safety Data Sheet (SDS).
WHS:	Workplace Health and Safety. WHS has replaced the term OHS, and is regulated by the WHS Act 2012 (SA).
WHSE:	Workplace Health, Safety and Environment
WHSE-MS:	WHSE Management System
WI:	Work Instruction
WWTP:	Waste Water Treatment Plant. A structure to remove biological and chemical wastes from water, thereby making it suitable for vineyard and woodlot irrigation.

2 Company Profile

Information pertaining to our organisation's profile is provided below:

- Wirra Wirra is located at McMurtrie Road, McLaren Vale, South Australia 5171 (see Figures 1 and 2 for location of winery operations and nearby vineyards).
- Originally established in 1894 by Robert Strangways Wigley as a vineyard then winery, the site has since expanded (the most recent phase was completed in 2005, which incorporated a more expansive cellar door) to currently employ about 40 staff.
- The company owns 50 ha of vineyards in South Australia, 21 ha of which (located around the winery) are certified bio-dynamic (through NASSA Certified Organic), whilst 29 ha (in the Adelaide Hills) are run conventionally.
- The company is licensed for our winery operations (EPA 13068), and crushes 2,000 to 2,500 tonnes of grapes each year. The main winemaking activities include:
 - Grape receipt (crushing, de-stemming and sometimes chilling before dispatch into tanks);
 - Fermentations;
 - Maturation of wine in tanks and/or barrels;
 - Blending and fining of the wine prior to bottling.
- Under the conditions of our license we have an operating waste water treatment facility that treats waste water from our winery operations; the water from which is irrigated onto woodlots.
- Dedicated areas are provided for the storage of products, including segregated areas for hazardous substances.

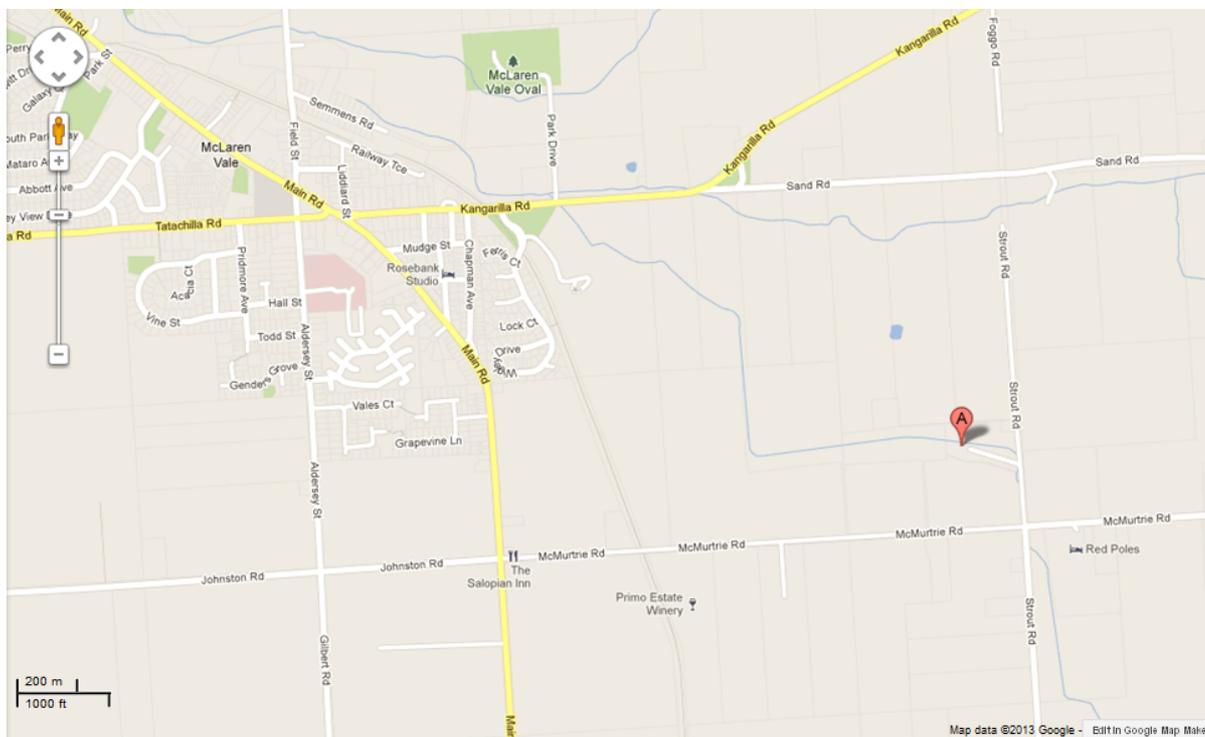


Figure 1: Location of Wirra Wirra (top and bottom).
Figures sourced from Google Earth on 07/02/2013 at 10:09am.



Figure 2 Site Map of Wirra Wirra Winery and nearby Vineyards
Figures sourced from Google Earth on 07 February 2013 at 10:09am.

3 Policy

3.1 Environment and sustainability

Our WHSE policy statement (WHSE001) has been defined and developed by Senior Management.

The document commits the company to meet all applicable legal requirements and other requirements to which we subscribe (such as those stipulated within contracts and tender documents), and is supported in its implementation by our EMP manual.

The policy statement will be maintained and reviewed by the Environmental Coordinator and the WHS Officer, in conjunction with Senior Management on a regular basis.

4 Planning

4.1 Environmental Compliance: Legal and Other Requirements

Ensuring we are aware of (and remain compliant with) relevant environmental legislation and other non-legislated environmental requirements to which our organisation subscribes is of paramount importance, as failure to comply can result in our winery operations being shut-down.

Our organisation subscribes to various resources including the SA Wine Industry Association's (SAWIA) 'Environmental Compliance Guidelines for the South Australian Wine Industry' and 'EPA Monitor newsletter'. This ensures we understand the full extent of environmental legislative requirements relevant to our operations and products. Further, we also take account of all non-legislative ('other') requirements that relate to our environmental aspects, which include the Draft Environmental Management Plan Guidelines for South Australian Wineries developed by Zero Waste SA in consultation with SAWIA (Zero Waste SA, September 2012) and Entwine.

The aforementioned information is used in conjunction with our WHSE hazard and risk management framework (detailed further within Section 4.3), to help determine what we must do to remain compliant. Environment Actions Plans, Standard Operating Procedures (SOPs) and Work Instructions (WIs) are also to be subsequently produced to further guide and assist this process.

Our Environmental Coordinator regularly evaluates our environmental compliance performance (and organisational environmental risk profile) against applicable statutory environmental requirements relating to our operations and products, and in particular those requirements specific to our environmental license, to ensure we remain compliant.

Further information relating to our environmental compliance requirements is provided below:

- Annual Report – National Pollutant Inventory (NPI)
- Annual Report – Australian Packaging Covenant (APC)
- Wirra Wirra Environmental License (EPA 13068)
- Environmental Compliance Guidelines for the South Australian Wine Industry (SAWIA).

4.2 Environment Asset Planning and Management

A review of environmental assets specific to our winery and selected (nearby) vineyards was undertaken in conjunction with the Adelaide and Mount Lofty Ranges Natural Resources Management Board (see Figure 3).

Following this review, a Biodiversity and Land Management Work Program (BLMWP) was created for the period 2010 to 2013 with the overall objective to build on previous weed control and re-vegetation programs by implementing follow-up weed control, (re-vegetation) and expanding works into previously untreated sections of the property; thereby improving regional biodiversity in addition to the quality and condition of the natural environment.

Our BLMWP should be referenced to guide our organisation's environmental asset planning and management until the end of 2013, then updated in 2014, and includes:

- a general description of winery (and nearby vineyards) assets;
- the context and rationale for the biodiversity and land management project;
- a detailed work program for weed control and re-vegetation activities for the period 2010 to 2013.

Our organisation implements a biodynamic and organic vineyard management framework to protect and appropriately manage environmental assets.

4.3 Evaluation of Environmental Hazards and Risks

Baseline environmental reviews of our organisation's operations, services, documentation and records have been completed internally, and on our behalf by external consultants.

This process has enabled us to review, update and (where necessary) develop relevant policies, procedures and work instructions aligned with the *Draft Environmental Management Plan Guidelines for South Australian Wineries (Zero Waste SA, September 2012)* and relevant aspects of AS/NZS ISO 14001:2004. This will ensure that a consistent and comprehensive approach to hazard identification, and risk prioritisation and management, is achieved by our organisation.

Our standardised WHSE hazard identification and risk management framework is composed by the following documents:

- WHSE risk management Policy/SOP
- WHSE Risk Assessment Form
- WHSE Incident Report Form
- WHSE Hazard Report Form
- Environment Hazard and Risk Register.

This framework is informed by our environmental compliance framework, and planned and actual operations, to assist our Management to:

- identify and prioritise actual and/or potential WHSE hazards and risks; and
- identify and implement appropriate preventative and/or control measures and activities to address the aforementioned hazards and risks.

To ensure its ongoing relevance, our WHSE risk management and prioritisation framework will be maintained and reviewed by Management on a regular basis, or immediately following a significant change to our operations and/or services.

4.4 Environment Objectives, Targets and Action Plans

Our WHSE policy establishes that we must set environmental objectives and targets to guide the implementation of our environmental programs, and as a basis to drive continual environmental improvement across our business and operations.

Wirra Wirra's action plan was created, using the environmental hazard and risk register, and taking into account the following points:

- Wirra Wirra's legal requirements and other requirements to which the organisation subscribes;
- Wirra Wirra's significant environmental aspects and impacts (hazards and risks);
- Wirra Wirra's financial options and business requirements; and
- Views of relevant key stakeholders to Wirra Wirra.

Objectives and targets were set on the same basis and considerations. They will be justified and remedial action initiated using Specific, Measurable, Achievable, Realistic and Time-Based ('SMART') Environmental Key Performance Indicators (E-KPIs) where practicable. This will ensure that we can effectively monitor and report on the aforementioned environmental objectives and targets.

A tabulated summary of objectives and targets (and related E-KPIs) is provided within Section 8.

Environmental Action Plans have also been developed as a basis to address our priority environmental hazards and risks, and contain the aforementioned environmental objectives, targets and E-KPIs. These action plans may also contain other projects' ideas focusing on improving the environmental sustainability of our operations and products.

Our environmental action plans will help guide the direction of our EMP, to ensure we continually strive to reduce our environmental footprint in the most effective and sustainable manner possible.

5 Implementation

5.1 Operational Control

Our organisation shall identify and appropriately plan high risk operations, deemed significant within our WHSE risk management register. This shall be achieved by:

- establishing, implementing and maintaining documented procedure(s) to control situations where their absence could lead to deviations from our WHSE Policy, environmental objectives and targets;
- stipulating the operating criteria in the procedure(s); and
- communicating applicable procedures and requirements to suppliers (including contractors).

For further information please refer to Sections 5.1.1 to 5.1.8 in addition to those Standard Operating Procedures (SOPs) managed under our WHS-MS, Quality Management System (QMS) and general (related) documentation.

5.1.1 Waste Management

We have established and will maintain procedures to control and appropriately manage the storage and disposal of waste onsite. Our general philosophy regarding the production and disposal of waste is to follow the 'Waste Hierarchy' principle:

avoid – reduce – reuse – recycle – recover – treat – dispose

Australian Packaging Covenant (APC)

As a voluntary signatory of the Australian Packaging Covenant (APC) our company is committed to minimising the environmental impacts arising from the disposal of used packaging, conserve resources through better design and production processes and facilitate the re-use and recycling of used packaging materials. This philosophy is also applied where possible to all promotional and administrative products consumed.

In maintaining our responsibilities as a signatory to the APC (as outlined within our waste management procedure), we will ensure compliance with the National Environmental Protection (Used Packaging Materials) Measure 2011 (Cth), and Environmental Protection (Used Packaging Materials) Policy 2012 (SA).

We will periodically review and, where necessary, revise our waste management protocols and procedures to ensure compliance with changing legislation and requirements and to strive to maximise resource use efficiency.

Further information regarding our waste management program and related procedures is provided within the below documents:

- Australian Packaging Covenant Report (dated: December 2011)
- Wirra Wirra Environmental License (EPA 13068)
- Waste Management Procedure and Waste Carriers License Register
- Environmental Action Plans.

5.1.2 Waste Water Treatment Plant (WWTP)

We operate a Waste Water Treatment Plant (WWTP) which treats all of the wastewater generated at the winery every year.

Our *Wastewater Treatment* standard operating procedure (SOP) covers all of the steps of winery effluent wastewater treatment, from the collection of the effluent generated in the winery, to the production of treated wastewater suitable for vineyard irrigation or woodlot irrigation. In addition to our waste water treatment monitoring program and environmental contingency plan (as detailed in 5.1.2), our facility complies with our environmental licensing obligations (see license conditions 150-35, 150-82, and 150-157).

Ultimate responsibility for the WWTP lies jointly with the Senior Winemaker and Environmental Co-ordinator, whereby the aforementioned SOPs are to be managed and updated (as appropriate) by the Environmental Co-ordinator.

5.1.3 Wirra Wirra Vineyards Emergency Contingency Plan

As part of our environmental licensing obligations (License condition 315-441), we are required to prepare and maintain a plan of action to be taken in the event of emergencies which may involve the risk of serious or material environmental harm. This plan requires our organisation to report any environmental incidents, significant spills or incidents causing (or having the potential to cause) environmental harm to the South Australian Environment Protection Authority.

Please refer to '*Wirra Wirra Vineyards Emergency Contingency Plan* for further information.

5.1.4 Cooling Towers

Under the *Public and Environmental Health (Legionella) Regulations 2008 (SA)* our company must actively manage warm water and cooling water systems to minimise the likelihood of Legionella and other water borne pathogens from occurring in line with *Australian Standard: AS/NZS 3666 Air handling and water systems of buildings – Microbial control*. In brief, this standard requires any warm water and cooling water systems operated by our company to:

- be registered with local council;
- be maintained in accordance with AS/NZS 3666.2 and AS/NZS 3666.3 or a program approved by the Minister;
- be fitted with a biocide dosing device that automatically discharges a measured amount of biocide to the system using a feedback control loop or timer;
- be fitted with drift eliminators that meet the requirements of AS/NZS 3666.1; and
- have regular inspections and *Legionella* sampling programs conducted in-house (or have this done by an independent competent person).

We must also ensure that operating manuals, maintenance manuals, schematic plans and up-to-date maintenance log books (for the aforementioned for warm water and cooling water systems) are kept on our premises in a readily accessible place; whereby any related documentation must be made available for inspection on request by an authorised officer at short notice.

Annual inspections and sampling programs may be undertaken by the local authority at random to ensure we meet these compliance requirements. Immediate decontamination of a cooling water system or warm water system must occur following notification of an elevated *Legionella* test result.

For further information, refer to our warm water and cooling water systems related documentation in conjunction with our *Legionella* monitoring and management program.

5.1.5 National Pollutant Inventory (NPI)

Our organisation is required to provide annual monitoring reports to the National Pollutant Inventory (NPI) regarding certain atmospheric emissions produced by our winery operations; a requirement which is mandated by National Environmental Protection Measure (NEPM) 2008 (Cth) and Environment Protection (NPI) Policy 2008 (SA).

For further information regarding our NPI monitoring and reporting obligations, please refer to Wirra Wirra's National Pollutant Inventory Report.

Responsibility for the NPI reporting lies jointly with the Senior Winemaker and Environmental Co-ordinator.

5.1.6 Control of Substances Hazardous to Health (COSHH)

Wirra Wirra has defined procedures for the management of hazardous materials and dangerous substances (Substances Hazardous to Health or SHH). We also have substance management protocols in place to ensure that the purchase, storage, transport and utilisation of hazardous substances and/or dangerous goods (SHH) by our organisation remains compliant at all times.

The use of SSH must be in line with the information supplied by the manufacturer of the item (e.g. Safety Data Sheet), and in accordance with our housekeeping requirements, general handling of chemicals and substance management procedures, and Control of Substances Hazardous to Health (COSHH) requirements.

For further information regarding our substance management and COSHH procedures please refer to the following documentation:

- Safety Data Sheets (SDS)
- Substance Management Procedures and Programs
- Wirra Wirra's Health and Safety Management Systems
- Control of Substances Hazardous to Health (COSHH) Procedure.

5.1.7 Environmental Incidents and Complaints

All environmental incidents and complaints should be recorded and reported in a timely and appropriate fashion in accordance with our WHSE risk assessment Policy, through our Risk Assessment Form or Incident Report Form; following which they will be investigated to determine their root cause. Any subsequent Non-Conformances (NC), corrective- and/or preventative- measures will then be actioned as appropriate. Environmental near misses and hazards should also be recorded and reported in a timely and appropriate fashion in accordance with our WHSE risk assessment framework.

5.1.8 Environmental Nuisance

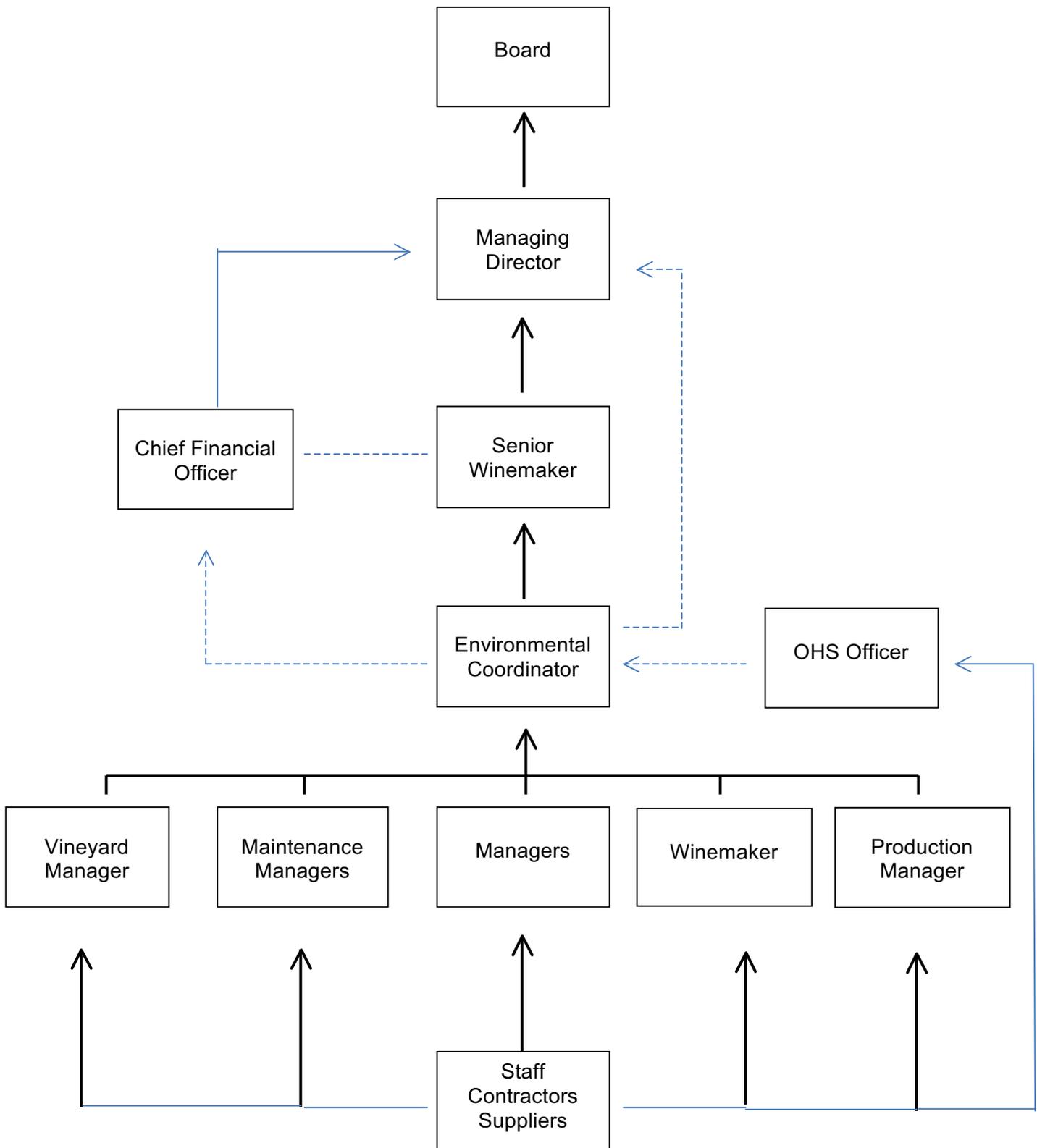
We are committed to actively and effectively manage actual and potential sources of environmental nuisance across the full extent of our operations, and strive to minimise sources of environmental nuisance (specifically noise and odour) and their associated impacts to our neighbours and to members of the local community.

5.2 Document Control and Record Management

Wirra Wirra has established document control and record (archiving) systems that ensure environmental documentation, records and monitoring data is retained, controlled, adequately protected, and remains legible and identifiable. Environmental documents (stored in both electronic and hard copy format) are created and maintained in a manner to make them readily retrievable, in facilities that provide an environment to minimise deterioration or damage and to prevent loss.

6 Environmental Roles, Responsibilities and Authority

The below is a diagrammatic representation of our environmental responsibility structure, which reflects our environmental communication flow (e.g. when an incident happens). Further details regarding environmentally specific roles and responsibilities are summarised within our WHSE policy, and expanded upon within the table provided (overleaf).



Managing Director

Retains ultimate responsibility for environmental legal compliance and compliance with other requirements to which our organisation subscribes.

Ensures sufficient resources are made available to enable Wirra Wirra's Environmental Management Plan (EMP) to run effectively and efficiently.

Reviews performance against environmental objectives and targets.

Attends Environmental Management Review (EMR) meetings.

Leads by example and helps set environmental standards.

Environmental Coordinator

Responsible for the co-ordination and maintenance of Wirra Wirra's Environmental Management Plan (EMP), manual and related programs, procedure and work instructions.

Assists managers and supervisors to identify, develop and provide appropriate environmentally related information, instruction and training.

Assists in helping to ensure processes, products and projects are developed and implemented with due regard to their environmental impact.

Ensures that the intent and requirements of the WHSE Policy, EMP and related programs are effectively met and implemented.

Assists managers and supervisors to identify reasonably foreseeable environmental hazards and to assess and control risks to the surrounding environment.

Champions the identification of environmental improvements relevant to Wirra Wirra's operations.

Monitors Wirra Wirra's environmental performance and provide monthly reports to senior management relative to organisational performance against environmentally related objectives and targets.

Monitors and manages Wirra Wirra's waste water treatment plant and systems.

Monitors and advises on legislative and technical changes relating to the winery's environmental license and related management practices to ensure ongoing compliance requirements are fulfilled.

Assists in ensuring contractors and sub-contractors comply with environmental procedures, rules and work instructions and are made aware of changes.

Co-responsibility for communicating the company's WHSE policy and environmental requirements.

Co-responsibility for the management of waste carriers, waste streams and related documentation and monitoring requirements.

Coordinates and attends all Environmental Management Review (EMR) meetings.

Oversees resolution of environmental non-conformities, relative to Wirra Wirra's operations.

Co-ordinates employee, contractor, sub-contractor and service provider environmental inductions.

Co-responsibility for responding to environmentally related complaints are appropriately managed.

Chief Financial Officer (CFO)

Provides financial data and related records to relevant personnel, to assist with the management and monitoring of Wirra Wirra's environmental management program.

Attends Environmental Management Review (EMR) Meetings.

Assumes additional responsibilities designated to all Managers.

Assumes additional responsibilities designated to all Employees.

Senior Wine Maker

Co-responsibility for responding to environmentally related complaints.

Co-responsibility for responding to emergencies.

Attends Environmental Management Review (EMR) meetings.

Assumes additional responsibilities designated to all managers.

Assumes additional responsibilities designated to all employees.

Vineyard Manager

Attends Environmental Management Review (EMR) meetings.

Co-responsibility with Environmental Coordinator for wastewater irrigation: functional liaison with Environmental Coordinator regarding the appropriate application of wastewater on woodlot opposite dam.

Co-responsibilities with Environmental Coordinator for Re-vegetation Management Plan.

Assumes additional responsibilities designated to all managers.

Assumes additional responsibilities designated to all employees.

Production Manager

Responsible for ensuring Wirra Wirra achieves ongoing compliance against its Australian Packaging Covenant (APC) related requirements. This includes provision of annual report to APC.

Co-responsibility for the management of waste carriers, waste streams and related documentation and monitoring requirements.

Attends Environmental Management Review (EMR) meetings.

Assumes additional responsibilities designated to all managers.

Assumes additional responsibilities designated to all employees.

Maintenance Manager

Attends Environmental Management Review (EMR) meetings.

Co-responsibility for sewage treatment maintenance.

Co-responsibility for wastewater treatment plant maintenance.

Assumes additional responsibilities designated to all managers.

Assumes additional responsibilities designated to all employees.

Marketing Manager

Attends Environmental Management Review (EMR) meetings.

Understands the Australian Packaging Covenant requirements and its implications for its design and development of product packaging.

Assumes additional responsibilities designated to all managers.

Assumes additional responsibilities designated to all employees.

OHS Coordinator

Co-responsibility for assisting with the maintenance of the WHSE policy.

Attends Environmental Management Review (EMR) meetings.

Assumes additional responsibilities designated to all managers.

Assumes additional responsibilities designated to all employees.

Managers and Supervisors

Ensure processes, products and projects specific to their area of responsibility are developed and implemented with due regard to their environmental impact.

Carry out roles and responsibilities as detailed in relevant internal environmental policies and procedures.

Ensure environmental policies and procedures are effectively implemented relevant to their work teams and areas of responsibility.

Help identify areas of improvement for company operations and environmental performance relevant to their work teams and areas of responsibility.

Assist with compliance to specific environmental procedures, rules and instructions relevant to their work teams and areas of responsibility.

Co-responsibility for communicating the company's WHSE policy and environmental requirements relevant to work teams and areas of responsibility.

Ensure environmental risk control measures are monitored and maintained relevant to their work teams and areas of responsibility.

Co-responsibility for ensuring staff under their control are provided with necessary information, instruction, training and supervision to effectively, safely and sustainably carry out their duties.

Assist in ensuring contractors and sub-contractors comply with environmental procedures, rules and work instructions and are made aware of changes relevant to areas of responsibility.

Notification of relevant changes to Environmental Management Plan (EMP) relevant to their work teams and areas of responsibility.

Assist with 'other' compliance requirements compliance relevant to their work teams and areas of responsibility.

Lead by example, set standards relevant to their work teams and areas of responsibility.

Assume additional responsibilities designated to all employees.

Wine Maker

Assumes additional responsibilities designated to all supervisors.

Assumes additional responsibilities designated to all employees.

Viticulturalist

Assumes additional responsibilities designated to all supervisors.

Assumes additional responsibilities designated to all employees.

Employees

Each and every employee is responsible for ensuring the standard application of the Environmental Management Plan (EMP) relative to their immediate sphere of operation.

Use any equipment and implement any operational control measures provided to prevent environmental harm being caused while at work.

Report any environmental emergency, incident or hazard at work to their manager or supervisor.

Be aware of Wirra Wirra's WHSE policy.

Participation in relevant environmental projects and initiatives (as required).

Support the company's environmental and sustainable agenda.

Must not wilfully interfere with or misuse items or facilities provided.

Obey any reasonable instruction aimed at the environment whilst they are at work.

Carry out their environmental roles and responsibilities as detailed in relevant environmental documentation (e.g. EMP, SOPs, WIs, etc.).

Assist in the identification of environmental hazards, the assessment of risks and the implementation of risk control measures.

Not enter restricted areas without permission.

Contractors, Sub-contractors and Selected Service Providers

Identify and report health, safety or environmental issues and risks relative to their operations and activities, whilst acting on our behalf.

Comply with company environmental procedures, rules and instructions.

Be aware of Wirra Wirra's WHSE policy.

Inform us of dangers, accidents and near misses occurring at our site(s).

Consult with Wirra Wirra's key contacts regarding environmental issues, potential hazards and risks.

Not enter restricted areas without permission.

Maintain a duty of care to prevent pollution and to minimise their environmental impacts, relative to the activities they undertake for, or on behalf of, our organisation.

Not wilfully interfering with or misusing items or facilities provided in the interest of work health, safety or environmental (WHSE) management.

7 Communication

7.1 Ensuring Effective Communication

We communicate to others about our environmental performance where appropriate, for example:

- Our WHSE policy and environmental statement will be made available to internal staff and externally via our website
- Our website will feature our environmental achievements and vision
- Contractors working for us or on our behalf are required to follow our environmental policies and procedures that are relevant to their work
- Responsibilities for ensuring contractor compliance lie with relevant members of our Management Team (i.e. Managing Director, Production Manager, Environmental Coordinator).

Furthermore, in alignment with our environmental training framework, our WHSE policy and relevant environmental procedures will be distributed by Management to inform key stakeholders of our commitment to environmental sustainability during inductions, 'induction refreshers' and within company communications (i.e. internal bulletins, intranet, etc.).

7.2 Observance of Notices and Written Instructions

Employees, contractors and sub-contractors are expected to read all authorised company notices on matters related to the environment. Where required, notices shall be explained to employees by management.

Employees, contractors and sub-contractors must also observe and comply with all environmental instructions and controls displayed on our premises.

Employees, contractors and sub-contractors may only undertake 'high risk' activities or operate 'high risk' machinery, plant or equipment in accordance with the appropriate standard operating instructions and after authorisation by Wirra Wirra's Environmental Coordinator and any other relevant managers and representatives.

Further information regarding roles and responsibilities is provided within Section 6.

8 Measurement, Monitoring and Evaluation

As discussed in Section 4.4, we will seek to monitor Environmental Key Performance Indicators (E-KPIs) to ensure we achieve our EMP's objectives and targets. Refer to the table (provided overleaf) for a summary of our environmental objectives, targets and E-KPI's.

Where analysis of effluent, soil and water is carried out by an external laboratory on behalf of our organisation, we must ensure that the laboratory is registered by NATA or, by a laboratory which is certified with appropriate ISO 9000 series certification.

As discussed in Section 4.4, we will periodically review and, where necessary, revise our EMP (and related policies, procedures and work instructions) to ensure compliance with changing legislation and requirements and to help us to maximise our resource use efficiency.

Our Chief Financial Officer (CFO) in association with the Environmental Coordinator, Production Manager, and selected key staff members will compile and collate the information included within the table on the following page, and present reports to key stakeholders relative to Wirra Wirra's performance. These key stakeholders may include Wirra Wirra Board Members, or other key stakeholders (as deemed appropriate by Senior Management).

Further, detailed reports summarising priority environmental objectives and targets will also be presented to our Managing Director at least annually.

Reference documentation required to assist our measurement, monitoring and evaluation programs includes:

- Compliance Monitoring Data and Records
- Waste Monitoring Data and Records
- Energy and Emissions Monitoring Data and Records
- Central WHSE Risk Register
- Environment Action Plans.

Issue and Aspect	Objective and Target	Environmental Key Performance Indicator (E-KPI)	E-KPI Ref #	Person(s) Responsible	Review Frequency
Environmentally Related Complaints	No environmentally related complaints (ie. noise, odour, litter, etc.).	# environmentally related complaints.	1	Environmental Coordinator	6-monthly
Waste / Recycling	Maximise recycling of waste streams as far as practicable.	Benchmark and record total proportion of waste sent to landfill versus waste recycled.	2	Production Manager Environmental Coordinator	Quarterly
Environmental Compliance – Wirra Wirra Vineyards Environmental Monitoring Program	Comply with environmental license condition 305-354.	100% compliance	3	Environmental Coordinator Vineyard Manager	Ongoing
Environmental Awareness	85% of Wirra Wirra staff to have undertaken environment induction.	# staff undertaking environment induction (refer to staff training records).	4	Environmental Coordinator OHS Officer	Dec 2013
Environmental Incidents	To implement corrective actions within three months of an incident report form being submitted.	# actions implemented within three months of reporting (review dates for environmental non-conformances (i.e. outstanding vs actioned)).	5	Senior Wine Maker Environmental Coordinator OHS Officer	Ongoing
Environmental Compliance – Waste Water Irrigation Management	Maintain compliance with environmental condition 150-35.	100% compliance.	6	Environmental Coordinator Vineyard Manager	Ongoing
Environmental Compliance – Australian Packaging Covenant	Maintain Compliance with Requirements of Australian Packaging Covenant (APC).	Degree (%) compliance with APC requirements (refer to submission and approval of annual report to APC).	7	Production Manager	Annually
Protection and Enhancement of Environmental Assets	Protect and enhance regional biodiversity.	Re-vegetation and weed control activities undertaken (can be in area or # planted).	8	Environmental Coordinator Vineyard Manager Viticulturalist	Ongoing
Environmental Compliance – Sludge Management and Disposal.	Maintain compliance with environmental license condition 150-142.	100% compliance.	9	Senior Wine Maker Environmental Coordinator	Ongoing

Issue and Aspect	Objective and Target	Environmental Key Performance Indicator (E-KPI)	E-KPI Ref #	Person(s) Responsible	Review Frequency
Environmental Compliance – Filter Media Management and Disposal.	Maintain compliance with environmental license condition 150-150.	100% compliance	10	Senior Wine Maker Environmental Coordinator	Ongoing
Environmental Compliance – Storage of by-Products or Wastes	Maintain compliance with environmental license condition 150-161.	100% compliance	11	Senior Wine Maker Environmental Coordinator	Ongoing
EMP Review Cycle	Review 100% of core EMP documentation every 24 months.	% EMP documents reviewed since establishment of EMP.	12	Environmental Coordinator	24 Months
Water Conservation	Benchmark and strive to improve water use efficiency throughout winery and vineyards.	Benchmark water consumption per: <ul style="list-style-type: none"> - Hectare (vineyards) - 1,000 L of product (winery) - \$1,000 turnover (organisational). 	13	Senior Wine Maker Environmental Coordinator Vineyard Manager	Ongoing
Energy Conservation	Benchmark and strive to improve energy efficiency throughout winery and vineyards.	Benchmark fuel, electricity and gas consumption per: <ul style="list-style-type: none"> - Hectare (vineyards) - 1,000 L of product (winery) - \$1,000 turnover (organisational). 	14	Senior Wine Maker Environmental Coordinator Vineyard Manager	Ongoing

9 Review

9.1 Environmental Management Reviews

Formal Environmental Management Review meetings in addition to informal review meetings will be undertaken where necessary to ensure continuing suitability, adequacy, and effectiveness of Wirra Wirra's Environmental Management framework.

Environmental Management Review meetings will be held at least once annually, and will comprise:

- Managing Director
- Chief Financial Officer
- Senior Winemaker
- Vineyard Manager
- Production Manager
- Maintenance Manager
- Environmental Coordinator
- OHS Coordinator (where relevant).

10 EMP Policies, Procedures and Statements (CORE)