



Environmental Management Plan 2024/25

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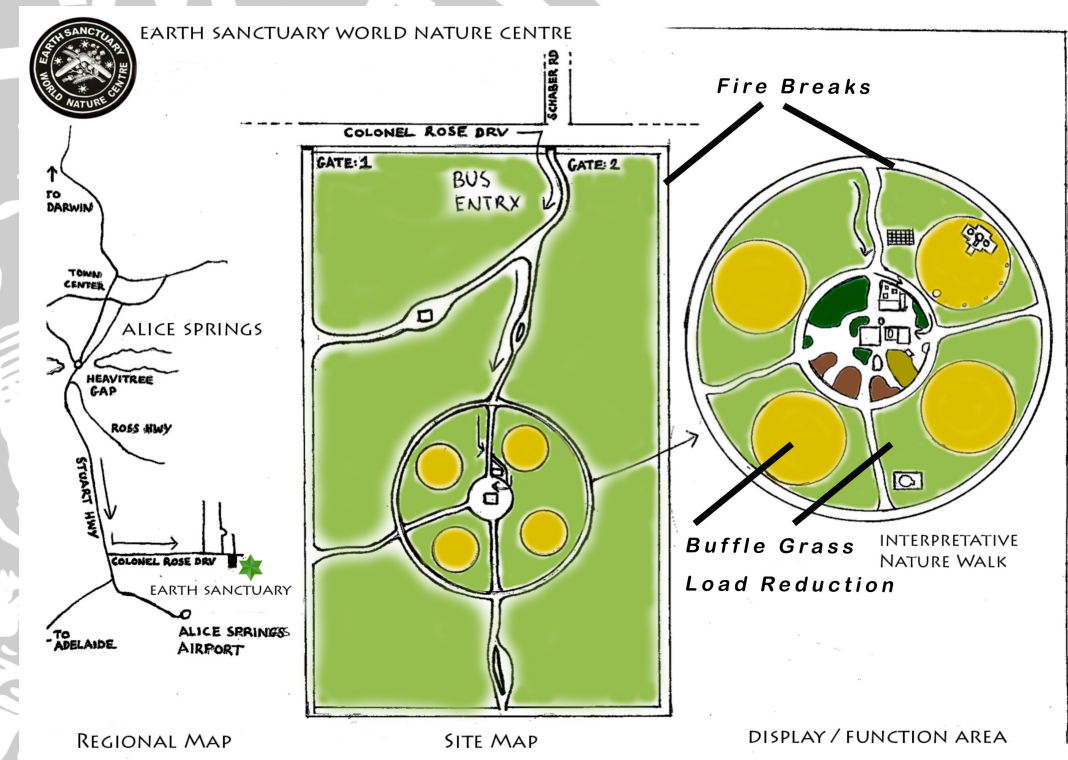
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1.0 Scope

This environmental management plan is designed to ensure compliance with all requirements regarding the environmental aspects of the business. *Earth Sanctuary* endeavors to identify and minimise all possible environmental risks applicable to the business.

The scope of work undertaken by *Earth Sanctuary* includes the following activities:

- Sustainable Living Centre
- Sustainable education – ecology, culture and astronomy
- Eco tourism – tours and events.

Ecological risk is the risk of irreversible change to the natural environment and ecosystem resulting from an activity. It includes consideration of the conservation significance of natural areas and its resilience to damage and its ability to rehabilitate.

Likely impact is considered by examining the duration of the activity and potential environmental change occurring. As a rule, areas of high conservation values have been avoided in the development of buildings, facilities and activities.

Overview

Historically Earth Sanctuary has undergone self regulation to measure and account for its environmental impact. Prior to 2022, Earth Sanctuary engaged Carbon Neutral Australia who provided carbon measuring tools to more accurately measure the where excess carbon can be offset through various tree transplantation initiatives. In 2022, Earth Sanctuary engaged Coolplanet as a third party sustainable expert and auditor who could then assist the organisation to become more accurate in the reporting process to ensure greater transparency and clarity.

GRI Framework

The GRI mechanism promotes transparency and accountability for businesses and organizations to publicly report on their impacts on economic, environmental, social, and human rights issues. The GRI framework for sustainability reporting covers three series of interconnected Standards in a modular system. These are the GRI Universal Standards, which apply to all organizations; the GRI Sector Standards, applicable to specific sectors; and the GRI Topic Standards, each listing disclosures relevant to a particular topic. Using these Standards to determine what topics are material (relevant) helps organizations to achieve sustainable development.

Sustainability in Action

Earth Sanctuary has achieved many milestones to become Central Australia's key destination for sustainability. As a 'Champion' for both Alice Solar City and 'Water Smart' these include developments in energy, water, shelter, food, utilities and wellbeing.

Energy: 10.5 KW Solar Array, grid-connect. Stand Alone Power System - apprx 5 KW wind power (the largest wind farm in Central

Australia) and 1.5 KW Solar array. 48 x 225 Amp Hour – 6-volt battery bank, Selectronics 3000 Watt Inverter. Earth Sanctuary Homestead has been refitted with Compact Fluorescent Lights, energy efficient appliances, white 'Insullad' thermal paint applied to the roof and appropriate eastern & western shading used.

Water: 60,000 litre water tanks for rain catchments. All guttering connected to tanks. Aqua Space water purification systems. Native garden fed by rainwater catchments. Enviro Loo water-less toilet (composting) and a 880 litre Solar Hot Water System to cater for groups of up to 24 people.

Food: The Sanctuary's Horticultural area is set up and maintained to grow potatoes, pumpkin, lettuce, cabbage, peas, herbs and onions.

Utilities: All equipment and utilities at Earth Sanctuary are kept and maintained to achieve a minimum impact on the environment. Earth Sanctuary has just invested into a state of art solar electric vehicle once used in the 2000 Olympics to show off energy efficiency in transport. We also utilize solar ovens for cooking, fuel-efficient vehicles, bicycles and our 25 KVA generator that is intended to convert to run of Bio-fuel.

Shelter: In addition to the Earth Sanctuary homestead and the Earth Station utility shelter, which includes a classroom for sustainability programs; the team are in completion of two fully functioning geodesic domes, which will incorporate all the knowledge, and learning encountered over the last 12 years into one framework. Geodesic domes offer huge benefits to the environment by requiring fewer resources to build, being more energy efficient and far more suitable to adverse weather conditions. This project now adds an enormous boost to our Sustainable Living Tours and Star Shows where they can show off one of the most advanced sustainable living environments in Australia.

Office Operations Include: Reducing paper wastage by not producing any form of paper brochures. Powering all of our office operations through our very own solar and wind farm. Using natural light in our office, and using our energy efficient bulbs only on dark days. Using energy efficient appliances and equipment. Using fans for cooling rather than air conditioning. Using only biodegradable, phosphate free, and non-toxic cleaning products cleaning products. Composting food scraps and lawn waste using the compost bin at our office. Ensuring the majority of correspondence is done through email to reduce the need for paper.

Volunteering our time to help local conservation efforts such as Land for Wildlife to preserve the habitats of threatened and endangered species. Reducing our carbon footprint by offsetting all the carbon emissions from any staff air travel.

Environmental Aspects and Impacts

An environmental site assessment checklist is used as the tool to identify risks to the environment associated with the scope of the business. A site environmental assessment has been undertaken and the environmental risks and their likely impact associated with the site have been included in this assessment.

The significant environmental impacts identified at the site are as follows:

- ⇒ Biodiversity conservation
- ⇒ Minimising disturbance to wildlife
- ⇒ Climate change initiatives & energy efficiency
- ⇒ Water conservation
- ⇒ Treatment of waste water and effluent
- ⇒ Recycling and reuse of waste
- ⇒ Litter control
- ⇒ Hazardous substances spills
- ⇒ Risk of fire
- ⇒ Noise control
- ⇒ Air quality
- ⇒ Lighting and other visual impacts
- ⇒ Vibration of plant equipment



A list of activities undertaken by the business and the customer is detailed below *including environmental, social and cultural risks.*

Activity	Risk Involved	Strategy to Minimise Risk	Responsibility
Vehicles	Fumes, Noise, disturbances to wildlife.	Minimal traffic policy to Earth Sanctuary. Low v vehicle speed limits imposed on roads.	Management.
Fire	Buffle grass proposes a hight fire risk.	Hand removal. Slashing. Fire tracks. Grading.	Management
Walking Paths	Human impact from walking, trekking	Walk tracks allocated and all staff/visitors instructed to stay on paths.	Grounds Keeper Management
Energy	Energy use for programs, functions and Events demands higher energy usage.	Investment into renewable technologies. Acquire more energy efficient appliances. Public education on responsible energy use.	Grounds Keeper Management
Water	Water use through toilets, showers and basins.	Utilize technologies that can mitigate these areas such as half flush toilets, water saver shower heads and visitor education, awareness.	Grounds Keeper Management
Building	Non-Sustainable infrastructure can cause negative impacts on the natural environment.	Non-permanent dwellings are erected at Earth Sanctuary to deliver no to negligible impact on the environment.	Grounds Keeper Management
Utilities	Vehicle fleet, generators require diesel fuel and emit pollution.	Minimize use, improve efficiency and eventually convert to bio-diesel.	Grounds Keeper Management
Food	Transport costs in acquiring food for tours – pollution.	Source food from local producers and grow your own.	Grounds Keeper Management

3.0 Environmental Monitoring and Audit Plan

Tom Falzon is the current Environmental Representative onsite and is charged with monitoring the environmental management of Earth Sanctuary, this role is also shared amongst all Earth Sanctuary Management.

In support of the environmental monitoring and audit plan, The Environmental Representative on site shall observe and record general observations and activities associated with the environment;

- During unusual or extreme weather conditions at time of, team meetings are called and any necessary actions are made relevant to environmental risk and staff safety.
- When work is undertaken in close proximity to stormwater drains or any natural water courses, environmental assessments are made and actions taken to relevant authorities.
- When the likelihood of air quality may be affected, actions are taken to ensure this is either stopped or mitigated.
- Should noise from activities impose a risk, particularly at night, the Sanctuary noise curfew must be up held and where not possible, appropriate legal action is taken.
- When there is a risk of fire, all staff must assemble to carry out actions in accordance to the Sanctuary hazards plan.
- Where the aspects and impacts register identifies a risk that requires monitoring, a staff member will be allocated to carry this out and all appropriate measures be undertaken to ensure the potential risk is mitigated.

➔ Emissions

Vehicles and vessels are regularly maintained to ensure efficient running:

- Engine maintenance
- Tyre pressure checks
- Efficient repair response times

Joe Falzon ensures that chemicals, oils and waste are not discharged into surface or groundwater.

➔ **Air Quality**

. *Earth Sanctuary* complies with all emission limits in the State Environment Protection Policy (Air Quality).

All vehicles belonging to . *Earth Sanctuary* or their subcontractors shall have installed pollution minimisation devices, maintained and repaired so the devices comply with prescribed standards or maximum permissible concentrations of emissions.

➔ **Noise Pollution**

. *Earth Sanctuary* and their subcontractors shall undertake plant risk assessments, including noise management, prior to moving any mobile plant or equipment onto site.

➔ **Dangerous Goods and Hazardous Substances**

Refuelling shall not be carried out in any area of Earths Sanctuary other than the allocated refueling area.

Storage of chemicals and fuels shall only be in the designated fuel storage area.

. *Earth Sanctuary* has plans for the management of spills or leakage of hazardous substances should they occur:

Should fuel or any potentially hazardous substance be spilt, contingency plans shall be in place to have the dangerous substance confined within the spilt area on site until the incident can be effectively managed.

Identified Chemical Hazard	Storage and Handling Procedures	Treatment if Affected
Diesel Fuel	44 Gallon Drums on spill mats.	Spill mats guarantee no contamination of local area. Excess fuel can be collected and taken to Alice Springs – Greece Monkeys.
Gas	Gas storage is adjacent to the Earth Sanctuary entertainment area.	Staff and BOC gasses regularly take gas inspections. Should a leak be detected the system is shut down and immediate repairs are made.

Monitoring of windrows for risk of combustion shall be undertaken through continued site inspections, slashing of neighboring areas, hand removal of buffle and Airport inspections in conjunction with machine operators to ensure the risks are minimized. Appropriate fire management controls, including trained personnel and fire fighting equipment shall be available in case of an emergency.

➔ **Waste Management and Minimisation**

Earth Sanctuary ensures all waste is managed in accordance with the Industrial Waste Management Policy for Prescribed Industrial Waste.

Earth Sanctuary has adopted a policy to reduce, reuse and recycle.

Earth Sanctuary will not store, transport, treat or reprocess waste in any way or form that may result in an unfavourable environmental impact.

Earth Sanctuary will not establish any waste/refuse dump or other solid or liquid waste disposal on site.

Earth Sanctuary shall take all reasonable precautions to ensure that all industrial prescribed waste transported from the site is done so in a licensed vehicle with a valid EPA permit.

➔ **Reuse and Recycling**

Earth Sanctuary shall ensure the following reuse and recycling systems apply in their production and delivery services:

- Only recycled water is used in garden and swimming pool.
- Unused or obsolete materials are taken to the town recycling establishments.
- Glass and cans are exchanged with Alice Town Council.

2.0 Legal and Regulatory Matters

Legal obligations in relation to the environment shall include obligations relating to the following Acts and Regulations:

- ... The Airport Environment Strategy (AES) 2009 - Commonwealth
- ...Department of Health – Health Act NT/ Environmental Protection Act 1993

3.0 Emergency Preparedness

Environmental Protection Act ensures all employees and subcontractors are aware of the prime contractors emergency preparedness plan and procedures on site.

The emergency evacuation process, the emergency fire fighting system and the emergency plans for spillage containment and live endangerment is included in all site inductions.

4.0 Administration

➔ Records

The Aspects and Impact Register shall be maintained on site and include the following information:

- identified environmental risks (aspects) and their controls
- responsibility for actioning
- records of actions having been taken.

➔ Audits

An audit of the environmental management plan is incorporated into the site safety audits undertaken by the OHS/Enviro representative. Should an environmental incident occur which has significant impact on the environment, including long-term damage, a separate audit will be performed by an independent environmental auditor and provided to the client for review and appropriate actioning. Records of audits and monitoring shall be kept.

➔ Training and Induction

- Environmental awareness education and training is included in the induction of new staff employed at Environmental Protection Act.
- Follow up training is carried out on premises, with Bush Fire Council or relevant training authorities.
- Subcontractor training and induction follows that of *Earth Sanctuary* staff.
- Clients have an orientation of the facility and are given minimal impact guidelines to follow.

- ➔ **Non-conformance** - Corrective actions associated with the environmental management system will be taken within 7 days of receipt of the Corrective Action Request. The Corrective and Preventive Action Procedure as issued in the quality management system is used for managing environmental corrective actions.

Environmental Audit: Conducted Friday 2nd December 2022 by Cool Planet

This audit covered the following key criteria:

• Develop the report boundaries and responsibilities for reporting information.
• Conduct an energy, waste and water assessment on the property.
• Have a deep dive on waste and work towards best practice

- As part of the is audit, an application has now been submitted for Earth Sanctuary as part of Climate Active Australia

Earth Sanctuary – Environmental & Carbon Reduction Action Plan

Page 1 – Introduction & Overview

Purpose of the Action Plan:

- To document Earth Sanctuary's **day-to-day environmental initiatives**.
- To demonstrate how the organisation reduces its **carbon footprint** under six categories:

Energy, Water, Shelter, Food, Utilities, Wellbeing.

- To serve as a guide for staff, stakeholders, and visitors on sustainable practices.

Vision: Inspire change by operating as a living model of sustainability.

Page 2 – Energy & Water Actions

Energy

Daily Initiatives:

- Operate 10.5 kW solar array and 5 kW wind farm – 100% renewable energy.
- Monitor energy use via dashboards to optimise efficiency.
- Switch off non-essential lighting/equipment when not in use.
- Use LED lighting, passive cooling, and efficient appliances.
- Maintain battery banks for optimal storage capacity.
- Transition fleet to biofuels/solar-powered vehicles.

 **KPI: Maintain 100% renewable power use.**

Water

Daily Initiatives:

- Collect and store up to **60,000L rainwater**.
- Use greywater systems for gardens/landscaping.
- Compost toilets to save water.
- Solar hot water system used for visitor amenities.
- Regular inspections of plumbing and tanks to avoid leaks.

 **KPI: Reduce potable water use by >50% compared to conventional facilities.**

Page 3 – Shelter & Food Actions

Shelter

Daily Initiatives:

- Limit development to previously cleared land.
- Operate geodesic domes (30% less material, high efficiency).
- Use eco-friendly cleaning and maintenance products.
- Minimise paper use; digital-first operations.
- Inspections for structural efficiency and energy leakage.

 **KPI: Keep all infrastructure carbon neutral.**

Food

Daily Initiatives:

- Onsite horticultural gardens supply fresh produce.
- Compost food waste and reintegrate into soils.
- No single-use plastics in catering/tours.
- Source local, seasonal produce where possible.
- Educate visitors on sustainable food practices.

 **KPI: Divert >70% of food waste from landfill.**

Utilities & Wellbeing Actions

Utilities

Daily Initiatives:

- Recycling stations (glass, cans, plastics, paper, metals).
- Waste audits ensure landfill minimisation.
- Hazardous material management – spill kits, licensed disposal.
- Maintain renewable-powered IT, communications, and lighting systems.

 **KPI: Recycle or compost >80% of site waste.**

Wellbeing

Daily Initiatives:

- Staff induction and training in sustainability.
- Promote wellbeing through healthy food, clean energy, cultural engagement.
- Provide safe visitor experience (first aid, low-impact facilities).
- Host sustainability tours to educate public.
- Foster community partnerships (schools, Indigenous groups).

 **KPI: Deliver 100% of programs with sustainability learning outcomes.**

