

Leongatha Golf Club Environmental Plan



The Board of Leongatha Golf Club (LGC) has recently introduced an Environmental Sustainability Policy that aims to preserve and protect our natural bushland course, and to see that we operate in a sustainably responsible manner in all our operations.

To this end, this Environmental Plan outlines the strategies and procedures by which we aim to ensure that our Environmental Sustainability Policy is enacted.

The Course

▪ Trees and Bushland

The course has been carved out of remnant natural bushland and as such has many trees and bush areas within its boundaries. The bush at the course is Damp Heathy Woodland and Lowland Forest Mosaic.

It is the responsibility of the Board, Our Greens Committee, our employees, and all members that we retain as much of this unique environment as we can while ensuring the safety of our players, workers and visitors.

Such a heavily-treed course poses difficulties of our Course Superintendent with regards both the safety of players and also the maintenance of healthy greens, fairways and tees. From time to time it will be necessary to undertake heavy pruning or removal of trees that pose a safety risk, inhibit satisfactory course maintenance, or impact on the health of our course assets. Such operations will only be carried out when necessary, and will be conducted in such a manner as to minimise the environmental impact of them. No wholesale destruction of areas of bushland, or tree removal will be undertaken.

The three main eucalypts on the course are Eucalyptus Obliqua (Messmate), Eucalyptus Radiata (Peppermint), and Eucalyptus Viminalis (Manna), the essential tree for Koalas. We have many magnificent old growth examples of these. Trees this old are a rarity in South Gippsland.

Several of our trees have been identified by the South Gippsland Conservation Society as being of particular importance to the area. Although non indigenous to the course, these trees have been identified with a marking on them, and every effort will be made to protect

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them and ensure their survival. In addition to these trees, there are many other magnificent specimens on our course that we want to preserve.

In addition to being a feature of our course, the trees and bushland on it play an important role in offsetting our carbon footprint. Trees are known to capture large quantities of carbon dioxide and thus help to offset the environmental impact of our electricity consumption. This is another very important reason for us endeavouring to preserve our bushy, treed environment.

Paths, access tracks and firebreaks will be maintained for player safety, egress by course staff, course equipment, access to the course by emergency vehicles, whilst minimising erosion caused by usage or climatic conditions.

Plan:

- *Only prune or remove trees impaction on course health, or posing safety risk.*
- *Maintain areas of bushland including the understudy*
- *Preserve trees of importance*
- *Preserve trees to capture carbon dioxide from the atmosphere.*
- *Keep exotic and weed plants out of the bush area*
- *Maintain the biodiversity to ensure the health of the bush area*
- *Tree and bushland management to align with the current course improvement plan.*
- *Maintain paths, tracks and firebreaks to minimise erosion.*

▪ **Use of Chemicals**

Although we do not have any water courses, dams or rivers on-course, we are cognisant of the fact that run-off from the course has the potential to impact upon the water quality of nearby water catchment areas and other properties.

In order to minimise our impact upon our own, and the neighbouring environment, the use of chemicals on-course will be monitored and only resorted to if absolutely necessary to maintain the health of our course. Chemicals will also be selected to minimise their environmental effects. A good example of this selection process is the recent introduction of a seaweed-based chemical that has replaced a more dangerous chemical for treating disease in our greens.

On days when chemicals are being used on-course, signage alerting players to their use will be placed near the clubhouse to alert players. Spraying will be done to minimise the possibility of contaminating players.

A register and inventory of the chemicals used on-course is maintained, as is a log of their usage and there are appropriate wash-down facilities in the machinery shed precinct that contain spills and runoff.

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Our course staff wear PPE when using chemical on-course and are aware of their hazard to their health. This is particularly important when large fairway spraying is taking place.

Our lush santa ana couch fairways are a feature of our course. During seasonal growth periods, retardants may be used to slow the growth rate of the santa ana couch resulting in a reduction in the frequency of fairway mowing, and of our carbon footprint. The use of this chemical is to be minimised so that it is only used when absolutely necessary.

Plan:

- *Minimise use of non-organic chemicals on-course*
- *Carefully select chemicals to minimise their effect on the environment*
- *Notify players by signage when using chemicals on-course*
- *Maintain log of chemicals usage.*
- *Maintain a register of chemicals used on-course and an inventory of them*
- *Keep a collection of Material Data Safety Sheets for each chemical used.*
- *Ensure that only properly authorised/trained people use chemicals, and that the operators are aware of the dangers of the chemicals they use and ensure they use PPE when handling them.*

▪ **Water**

While we reside in a relatively high rainfall area with regular delivery, from time to time it is necessary to irrigate our course. This is particularly important for the health of our greens and tees, and these are watered regularly most of the year.

Thanks to the foresight of a previous Board of Management, we draw our irrigation water from a large club-owned dam that is located about 1.5km from the nearest point of the course (the 6th tee). Due to its very large size, we are self-sufficient in water, and do not draw any water from the local water authority's facilities. In all probability, this will continue to be the case for generations to come, and means that unlike many golf courses in Australia, we are environmentally responsible citizens in this regard in our local community.

The dam resides on a largely bush block some distance from the clubhouse (about 5 km) and course proper (about 1.5km). It has an earthen wall that retains the large body water, and it is important that this be maintained to ensure the structural integrity of it. As such, from time to time it will be necessary to remove vegetation and trees from it.

The club has recently installed an updated irrigation system that now allows for more controlled and targeted watering. The computer-controlled system now allows us to water

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overnight, and to make the watering system much more efficient by minimising evaporation by not having to water during hot days. At present the automated system is largely restricted to tees and greens watering, however when finances allow it is the club's intention to extend this system to allow for fully automatic watering of all our fairways as well.

In addition to minimising water consumption, watering overnight allows the club to make use of off-peak electricity consumption, thereby lessening our demand for peak electricity. This helps the electricity authorities to even out electricity demand across the grid.

The new irrigation system has also resulted in a much more energy efficient pump system being installed. Like a modern "inverter" type air conditioner, the new pumps run as hard as demand requires, not at maximum capacity as per the previous pump. This has resulted in a considerably reduced electricity consumption for the irrigation operation.

As the trees on the course get older and bigger, their root systems impact on the irrigation systems causing breakages of underground pipes resulting in water leakage and loss. Maintenance and upgrade of underground pipes is an ongoing program.

Plan:

- *Only water when necessary*
- *Monitor water usage and water condition.*
- *Regularly monitor structural integrity of the dam wall, remove vegetation or burrowing wombats from it when required.*
- *Continue to extend automatic fairway watering capability to all fairways*
- *Minimise electricity consumption while watering.*
- *Water security is a priority of LGC – maintain integrity of pipelines.*

▪ **Flora**

Within the boundaries of our course, we have many examples of indigenous flora. In recognising the importance of this, our club will strive to both maintain and protect as much local flora as we can. Areas containing flora of importance (such as near the 11th tee) will continue to be roped off and have restricted access during the growing season. Other areas will be preserved by restricting mowing operations.

Plan:

- *Monitor and preserve areas of flora of importance*
- *Restrict mowing operations in sensitive areas.*
- *Compile and maintain a register of the flora on our course*
- *Rehabilitate areas of the course damaged by wear & tear using only flora indigenous to the course*

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▪ Fauna

As with our flora, our course is home to a considerable number and diversity of fauna. We have regular sightings of koalas in our trees, an abundance of birdlife, lizards, wallabies and grey kangaroos, echidnas, possums, and even the odd snake or two! This fauna, combined with the bushland setting and our flora, bring much pleasure to our players, and we will endeavour to preserve and protect our fauna as much as possible.

We will endeavour to maintain areas of bush within the course area that provide a habitat for our fauna. Where possible, our fauna will be encouraged to thrive, and we will only take action to restrict them where they cause significant damage to the course or our other facilities.

Plan:

- *Monitor and preserve our fauna by compiling and maintaining a register of fauna we have on the course*
- *Restrict clearing of habitat and sensitive areas.*
- *Restrict fauna operations in areas where they cause significant damage*
- *Remind members and visitors to be respectful and careful when interacting with the wildlife.*

▪ Golf Carts

Our course is quite steep in areas, and as a result the club has many golfers who use golf carts to play their round. Many of these carts are owned by our members and are housed on-site in two cart sheds. The club also has a smaller number of carts for hire.

The majority of the carts used are electric powered, and this results in considerable demand for electricity to charge them. While we do have a 30KW solar system to help offset this demand, we are cognisant of the fact that we are still quite heavy consumers of electricity. When funds allow, it is our intention to install additional solar capacity to aid in this.

In addition to electric golf carts, some of our members own petrol-driven vehicles. Many of these are old, heavily-polluting types, and it is our intention to have them eventually replaced with either newer, less-polluting ones, or by electric carts.

Plan:

- *When finances allow, install additional solar power capacity*
- *Phase out old heavily-polluting petrol carts over a five-year period.*

▪ Machinery Fuel Usage

Our club has a considerable amount of machinery that is used to maintain our course. Our mowers, tractors, wood chippers, trucks, blowers and chainsaws all consume considerable amounts of fuel over the course of a year.

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Our Asset Replacement Plan enables us to regularly upgrade our on-course machinery in order to provide our staff and volunteers with good quality, safe, and efficient machinery.

This is complemented by regular maintenance schedule and together helps the club to monitor and minimise our fossil fuel usage. The newer equipment also provides manhour savings whilst resulting in a significant improvement in the presentation of the course.

Plan:

- *Continue to update course machinery as finances allow*
- *Consider fuel efficiency when selecting new equipment*
- *Maintain machinery so that they operate in the most fuel-efficient way*
- *Encourage course workers to minimise fuel consumption by turning off equipment when not in use.*
- *Consider machinery which uses renewable energy over fossil fuels when replacing equipment*

▪ **Disposal of fallen or pruned trees and branches**

During the course of a year, we have numerous trees and branches that are either felled, or are blown over. Our course workers are required to regularly remove these from the course in order to provide a safe playing area.

Much of the wood generated by this process is either used in the clubhouse, or taken by our members and staff for their personal use at home. However, considerable material that is of no use results, and this must be disposed of. The club has recently purchased a wood chipper for this purpose and it generated a considerable amount of mulch which is either used on-course, or sold to members. Material that is not suitable for either domestic wood heaters or mulching is taken to our on-course tip area where it is burned. The amount of material burned is minimised where possible.

Plan:

- *Continue practice of removing fallen trees from course*
- *Cut as much as possible for firewood*
- *Mulch as much as possible of remainder*
- *Ensure that only trained, properly equipped people operate chainsaws, mulchers etc.*
- *Burn what is left.*

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The Clubhouse and Surrounds

▪ Water

Along with our course, our clubhouse and machinery area draw no water from the local water authority facilities. We pride ourselves in the fact that we are totally self-sufficient.

The water used in our clubhouse is supplied by a series of freshwater tanks that harvest rainwater from our main clubhouse roof, and the roofs of the two cart sheds. This supplies ample water for use in the clubhouse for toilets, kitchen, drinking water, and general use. These facilities will be maintained and upgraded as required to meet our needs in the foreseeable future.

Plan:

- *Monitor fresh water supply for quantity and quality*
- *Maintain necessary tanks, pumps and filters to ensure continued water supply for the clubhouse and machinery sheds areas*
- *Ensure that the gutters on the roofs of the clubhouse and cart sheds are cleaned out on a regular basis*
- *Investigate the possibility of providing drinking water on-course.*

▪ Energy Consumption

We are a 364 day a year operation now, and as such use considerable amounts of energy to provide clubhouse, machinery sheds, and cart sheds lighting, refrigeration, heating, charge the many electric golf carts we have, and for general electricity consumption.

In recognising the impact of our electricity consumption on the environment, the club has recently installed a 30KW solar system on the roofs of our cart sheds. This system generates electricity when we are consuming most of our electricity, during the day when the clubhouse is open, thereby helping to offset our effect on the environment by reducing our peak electricity demand.

The main clubhouse area winter heating is provided by slow-combustion wood heaters, fuelled by wood we collect from fallen trees and branches on-course. While recognising that the practice of wood heating is not generally environmentally favoured, in our case it does help us make good use of the many fallen limbs and trees we have during the course of the year.

A considerable amount of electricity is consumed by lighting in the clubhouse, our cart sheds, and machinery sheds areas. We recognise that many of these lights (mostly fluorescent lights) are energy inefficient by modern day standards, and we are working towards their replacement. Already, the lights in our Pro-shop, and some 52 banks of fluorescent lights in our main clubhouse area, cart sheds, and machinery sheds, have been replaced by more efficient LED's, and we aim to eventually replace all our lights with LED's.

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Similarly, we have two large cool rooms that are used to cool food and drinks. We have recently had one of these cool rooms renovated with new insulation and an inverter-type compressor to improve energy efficiency, and it is our intention to do likewise with the remaining cool room.

The energy efficiency of the other refrigerators and appliances we use will also be monitored and when replacing them, energy consumption will be taken into consideration.

The club also uses a small amount of bottled gas for cooking in the kitchen. While we recognise that this is not the most efficient form of energy, due to our remote location, town gas is not an option, so in the foreseeable future we will continue this practice.

Plan:

- *Monitor electricity consumption throughout our operation.*
- *Continue program of replacement of lighting in clubhouse and other areas with LED lights.*
- *Continue plan to upgrade cool room to minimise electricity consumption.*
- *Encourage staff, members and visitors to reduce energy consumption where possible.*
- *Take energy consumption into consideration when selecting new appliances etc.*

▪ **Waste Disposal and Recycling**

Our clubhouse operations generate a considerable amount of waste. Packaging from deliveries to the proshop, drinks, food etc all generate waste. We also provide many on-course rubbish bins that encourage players to dispose of items they purchase from our clubhouse, or bring onto course, in an environmentally responsible manner rather than littering our course.

Our club currently contracts a local waste disposal company to remove our waste from the course. General rubbish is sorted onto recyclable cardboard waste, and general landfill waste. In addition, we have numerous recycling bins where aluminium cans, glass bottles and plastic bottles are stored and then recycled.

The clubhouse also provides food for sale to our golfers. Much of this is pre-packaged food such as pies and pasties. In addition, fresh sandwiches are made to order to minimise waste.

Leftover food is usually recycled by members for stock food. Our staff have become skilled in estimating our daily requirements in this area and thus are actively minimising our waste from this activity.

Plan:

- *Monitor our clubhouse operations to minimise waste.*

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- *Continue program of recycling bottles, cans, and packaging materials.*
- *Investigate ways of making further reductions in the amount and type of waste we generate.*
- *Encourage staff, members and visitors to utilise the waste disposal facilities we make available to them.*

Machinery Sheds Precinct

In order to maintain our course in the excellent condition it is at present, the club has supplied our course workers with an extensive fleet of equipment. This equipment, and associated workshop facilities, fuel storage facilities, sand storage bays and chemicals storage are located in a workshop precinct located centrally on-course.

The workshop precinct generates a considerable amount of waste in its operations. This waste is sorted into general waste which is disposed of via the clubhouse waste contractor, and general recycling waste such as bottles, cardboard and cans which is again disposed of via the clubhouse recycling system outlined earlier.

Waste specific to the Machinery sheds area is also recycled. Scrap metal is collected and recycled from time to time, as are chemical drums which go to the Drum Muster program.

The club has recently upgraded the machinery sheds precinct. Sand storage bays have been built to contain the various grades of sand used on the course. This minimises wastage and thus transport costs associated with sand delivery.

For chemicals storage, a locked dedicated shed is provided that reduces the risk of contamination, and danger of exposure for workers. The shed is vented to reduce airborne contamination of the shed.

Fuel (diesel and petrol) is stored in separate above-ground storage tanks and is gravity fed into our machinery.

Our machinery is serviced regularly in order to maintain it in good working order.

A separate wash down facility is provided for when the workers are using chemicals spray equipment. This facility also houses a safety shower. Whenever our workers are using chemicals, it is mandatory for them to wear the appropriate safety equipment including full, chemical hazard suit, face mask and breathing apparatus.

Plan:

- *Continue recycling program for waste generated in and around the machinery shed precinct.*
- *Continue plan to upgrade machinery where finances allow.*
- *Encourage our course workers to reduce energy consumption where possible.*
- *Take fuel consumption into consideration when selecting new equipment etc.*
- *Ensure appropriate PPE is available*

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Note: This Environmental Plan has been assembled by the LGC Board of Management and adopted at its 13th July 2020 Board Meeting.

It is to be considered as a “live” document in that it is continually evolving. It is the Board’s intention that it be reviewed on a regular basis and modified as required.