



La Grande Mare  
GOLF

*a place for everyone*



# Golf Course Maintenance Plan

By Rick Hamilton

## Mission Statement

To prepare, preserve and maintain the golf course as the major club asset and to afford the opportunity to provide enjoyment to its members and guests.

To protect, understand and fulfill the golf course management's vision and goals for a firm, fast and fair golf challenge for all levels of player ability.

To plan and execute programs and procedures that maintains a superior golf experience as well as enhances and protects the environment, property and aesthetics of the club.

## Vision

"In our future, we will enrich the heritage and prestige of La Grande Mare Golf Club. We will maintain and manage our financial resources, club assets and equipment to provide an exceptional golf experience to all members and visitors. We will offer state-of-the-art golf facilities and continually strive to effectively communicate with the golfing community.

## Document Purpose

The purpose of this document is to outline maintenance practices and procedures necessary to achieve International playing conditions for La Grande Mare Golf Course. Furthermore, this document is intended to serve as a guide for the operation of the La Grande Mare Golf course maintenance department.

## Objectives

The course will be maintained such that excellent playing conditions exist for both the tournament and the average golfer. The golf course should play near tournament standards, within weather limitations, on a continued basis and at tournament standards for certain events. These events will be determined annually by the Management team.

The goal of maintenance is the least amount of interference and inconsistencies as possible. Environmental stewardship and resource management will impact selecting and applying products to the golf course.

These objectives will be met within an overall annual capital and maintenance budget prepared by the Golf Department.

## Maintenance Standards

### Mowing Patterns

Mowing patterns, colour and contrast are very important in defining the boundaries of a golf hole. Mowing heights and mowing direction can affect turf colour and appearance, thus affect the legibility of a golf hole.

The diagram that follows illustrates the anticipated mowing height standards for La Grande Mare Golf Course during the average golf season. Note that tournament golf, and seasonal weather conditions affect mowing height.



Nine different types of mowers are needed to achieve these standards.

1. Greens mower either ride-on tri-plex or walk-behind 22inch width of cut
2. Tees, collars and aprons mower, same as greens mower with different set up cutting units
3. Fairway mower large 5 gang with 22inch cutting units
4. Trim mower for green and bunker surrounds, 3 gang with 28inch cutting units
5. Wide area primary rough mower 5 gang rotary deck cutting units
6. Wide area primary rough Trimax snake 3 gang tractor mounted heavy duty mower
7. Secondary rough mower for around trees and boundary, 60inch single deck Zero turn
8. Boundary mower tractor mounted Trimax flail

## Greens Standards

The greens quality ranked the best in Channel Islands and equal to the top international courses

- Greens will be mowed 7 days per week during peak growing periods, spring-autumn and 3-4times during winter when the soil temperatures drop below 10 Celsius. Mowing heights will vary from 2.8-5mm throughout the year to maintain optimum turfgrass plant health
- Daily/weekly monitor turf plant health
- Greens over-seeding twice a year
- Regular mower reel/blade sharpening is essential to maintain healthy turf plant and reduce disease
- Maintain smooth/true ball roll qualities
- Relative Green Speeds (under normal maintenance operations and weather permitting):
  - Regular Play: 8-8.5 feet as measured by USGA stimpmeter
  - Weekend Play: 8.5-9 feet as measured by USGA stimpmeter
  - Tournament Play: 10-11 feet as measured by USGA stimpmeter
- Execute best mowing practices, Ride-on and pedestrian mowers
- Regular cultural practices, grooming, vertical cutting, light sand topdressings
- Balanced nutritional inputs including PGR plant growth regulators
- Monthly aeratrion, Air2G2, Verti-drain 7316 with multi tines
- Greens will be irrigated as little as possible to promote deep rooting, drought tolerance, and minimal disease problems. Greens will be firm and the soil dry whenever possible.
- Greens will be checked daily with hole-cups being changed as needed
- Fertilizer and pesticide product application rates and frequency will be applied according to the GCM programs utilizing strict (IPM) ***“Integrated Pest Management”*** strategies outlined below. They will be reviewed each month with detailed records kept. Foliar fertilizer products are preferred to control growth of the plant better. Low rates of nitrogen will help control thatch especially when conditions are wet.

## Fairway Standards

The main objective for the fairways is to provide excellent turfgrass density, and clean-cut fairways ensuring clean golf club head and golf ball contact

- Fairways will be mowed at 12mm during spring/summer/autumn and 16mm during the wet winter months. They will generally be mowed 3 days a week depending on growth.
- Fairways will be aerated early spring and autumn with the John Deere tractor and verti-drain aerator with 19x180mm solid tines, and 10-12mm solid deep tines during the summer months to relieve compaction allowing water to move from the surface through the soil profile and into the drainage.
- Growth regulators will be used in the spring, summer, and autumn months to enhance turfgrass density and to reduce irrigation and grass clippings.
- Fairways will be irrigated for turfgrass health only, not for color.
- Sand topdressing will be applied to several key areas on the fairways to improve smoothness, drainage and aid in thatch reduction.

## Rough Standards

Improve rough playing surfaces. The main objective of the rough is to maintain at minimal levels while not compromising the aesthetics, severity of penalty, and speed of play.

- The rough will be maintained at a height between 30mm and 50mm with our new rotary mowers.
- The rough bordering fairway bunkers will be maintained regularly to maintain proper turf buffer between the bunker and fairway.
- The rough will be mowed at least once a week when actively growing.
- Large remote areas of rough will be cut monthly.
- Broadleaf weeds will be controlled as needed to promote aesthetics, playability and uniformity.
- Edges and O.B. areas of course will be mowed monthly: these areas include wooded areas with turf, fence edges, and out of the way native / meadow areas.

## Tee Standards

The objective is a teeing surface that is smooth, firm, level and without weeds. A conscientious effort will be taken to maintain our tees to resemble greens only cut slightly higher.

- Tees will be mowed at 12mm during the spring and lowered to 10mm for tournaments. Tees will generally be mowed four days a week depending on growth.
- The turfgrass quality will take priority over competition from tree roots, shade and restricted air circulation. Trees will be thinned and pruned on an as needed basis to ensure the highest quality of turf.
- Divots will be attended to daily; accessories will be checked daily for service.
- Tees will be aggressively aerated in the spring and Autumn using Verti-drain Aerator with 12mm solid tines.
- Tee blocks will be checked daily and changed as needed to utilize the greatest amount of teeing space.

## Bunker

The objective is to have bunkers with the proper amount of sand and be well distributed without rocks or other loose impediments. The bunkers should aesthetically complement the architect's original design and vision.

## Bunker Standards

- The bunkers will be checked daily for smoothness. Raking will consist of hand raking when needed depending on amount of play. Mechanical raking machine will be used periodically (weekly) to loosen compacted sand and to control weeds.
- Fairway bunkers will be hand-raked at all times to ensure sand firmness.
- The bunker edges facing the green will be maintained with a crisp edge consisting of a 5-10cm lip. The rear edges will be maintained with the sand reasonably flush with the turf.
- Stone and debris removal will be tended to daily with regular maintenance.
- The sand depth will be maintained at no less than 10cm.
- The bunkers will have adequate rakes around them. Large bunkers will have at least 3 rakes and small bunkers will have at least 2.
- The edges of bunkers will be regularly trimmed during the growing season

## PREPARATION FOR DAILY PLAY / GOLF COURSE SET-UP

The objective is to use various flagsticks and tee marker placements that challenge the golfers thinking and maintains quality of turf by spreading wear and reducing stress over various cupping and tee block areas.

## Course setup

- Greens will be checked with cups being changed 4 times per week in-season and off-season as needed. The course will be setup with an overall balance between the cups and tee position to maintain appropriate yardage. On weekends and during special member tournaments, tee blocks will be located at or near the back tees.
- Tournament setup: Tournament Coordinator (committee member) will be given the option of choosing flagstick / hole-cup placements utilizing a standard form used for such placements. Tournament Officials may leave it up to the Green Department for placements, these decisions should be made well in advance of the event (5-10 days) to avoid these areas leading up to the tournament.
- Tee markers will be checked daily and changed as needed to utilize the greatest amount of teeing space. A balance between the tee markers and flagstick / hole-cup positions will be maintained (6 Forward, 6 Middle and 6 Rear).

## Trees

- Trees in high traffic areas (Club House, walk paths, etc.) will be checked regularly for weak limbs, and hanging limbs and maintained, as necessary.
- Key trees will be fertilized and or mulched annually.
- Evergreen trees will be limbed up for aesthetics, maintenance, and ease play and finding lost golf balls.
- Trees will be pruned as time permits.
- Large areas of woods will be thinned to enhance turf quality, aesthetics, and the overall health of the other trees in the area.
- Most tree work will occur in the winter months.

## Habitat and Ecosystem Standards

La Grande Mare will provide and connect habitat corridors and native vegetation patches wherever possible in out-of-play areas on the golf course.

## Practice area

- The putting green will be maintained the same as on course greens
- The practice tee will be mowed twice a week at 12mm
- The Greens Department will not be responsible for distributing traffic or the safe separation of the golfers
- The short iron practice area will be maintained to the same standards as the golf course

## Clubhouse grounds

- Flowerbeds will be maintained, edged, and mulched as needed
- Grass areas will be mowed as needed
- Entire clubhouse area will be checked daily for trash and other unsightly debris
- Annuals and perennials will be planted in appropriate areas. Also, an assortment of other planters will be located throughout the area
- We will have an ornamental horticulturalist on staff with a landscaping background

## Irrigation system and water

- The turf watering system will be maintained in like new condition
- The system will be programmed to operate during non-play hours as weather dictates
- All leaks will be repair as soon as possible
- The systems pump station will be inspected by trained professionals prior to season activation
- Sprinkler heads will be inspected and adjusted to maintain proper watering patterns
- Irrigation audits will be performed systematically on portions of the golf course each year to assure system efficiency
- Ponds will be treated to eliminate unwanted odors and aquatic weeds
- Every effort will be made not to overwater and cause wet areas on the course

## Carts

- The course will be developed and maintained to accommodate cart usage
- Wet condition tracks will be developed in out of way areas to make it possible to provide minimal cart restrictions because of weather conditions
- Carts will be expected to use paths wherever possible
- Rope and signage will be used to direct cart traffic wherever necessary
- Cart traffic will be allowed to roam (except under extreme wet conditions). During high rainfall carts may be restricted to the rough on a day-to-day basis; this decision will be made by the Course manager

## **IPM STRATEGIES for golf course maintenance**

The ultimate goal of any turfgrass management system is to establish and maintain a high-quality turf at a reasonable cost, without being detrimental to the environment. With increasing concerns from regulatory agencies and the public about the environmental impacts of pesticides on surface and ground water, and on people, wildlife and other organisms, an understanding and application of integrated pest management (IPM) principles to turfgrass management programs is essential.

IPM is a management plan that utilizes a variety of control measures to keep turfgrass pest populations below levels that are economically and aesthetically damaging, without creating a hazard to people and the environment. These control measures include:

1. Inspection and monitoring
2. Proper cultural control methods
3. Biological controls
4. Using adapted species and resistant cultivars
5. Practicing proper sanitation measures to prevent the spread of disease
6. The use of the most appropriate pesticide when necessary

An important point to remember is that an IPM plan does not preclude pesticide use, but seeks to reduce dependency on pesticides. The objective of any IPM program is to reduce pest populations while keeping pesticide applications to a minimum.

## IPM control strategies

A variety of control tactics are available to the turfgrass manager. IPM involves understanding how these control tactics interact to influence the overall health of a turfgrass system. The primary objective in any IPM program is maintaining strong, healthy, actively growing turfgrass that can resist and recuperate successfully from environmental stresses, pest damage, and weed infestations. IPM control strategies include:

### Species and cultivar selection

Introducing a species outside its range of adaptation increases its susceptibility to pests and stresses. Turfgrass species and cultivars must be selected to match local environmental and playing conditions. Where possible, select adapted species and cultivars that minimize water and pesticide use.

### Mowing practices

Mowing height and frequency are directly related to the turfgrass species and growth rate of the plant. To minimize stress on the plant, no more than 1/3 of the leaf blade should be removed with anyone mowing. On greens, cutting heights consistently 3mm or less can place the turf under severe stress during weather extremes. Use of lightweight mowers on greens and fairways tremendously reduces soil compaction effects on turf growth.

### Irrigation practices

Properly watered turf is more resistant to insects and diseases. Excessive irrigation is one of the most common problems observed in the field. It is important to survey the irrigation system to ensure that all irrigation heads are working and set properly to obtain uniform coverage. Irrigation frequency should be dictated by meeting the evapotranspiration (ET) requirements of the plant. Irrigating deeply and less frequently produces a turf with a deeper root system and improved overall turf health. Care must be used when irrigating

shallow-rooted turfs. Monitor root depth, soil moisture, ET conditions, and use visual inspection to determine turf irrigation needs.

## Fertility and pH management

Fertility is a necessary component of turf management. No one fertilizer program or fertilizer can suit all situations. The type of program must be decided on by the Course Manager based on the specific conditions of the golf course. Fertilization should be scheduled to meet the nutritional and growth requirements of the plant. The frequency of fertilizer application will vary depending on the turfgrass species and the type of fertilizer. Slow release fertilizers, or natural organic materials, will be used at LGM when possible. A soil test is the best diagnostic tool available for assessing soil pH and phosphorus and potassium needs of the turf plant, as well as other nutrients. Soil test results serve as a guide for proper application of nutrients, avoids the waste of excessive fertilizer applications, and ensures that nutrients are applied in the proper proportions. Once the turf has become established, soil tests will be conducted every 1-3 years.

## Thatch control

The potential for thatch problems varies with turfgrass species, intensity of culture and traffic. Thatch becomes a problem on fairways and greens when it accumulates to a depth that increases potential for puffiness, mower scalping, disease development, and localized dry spot formation. Avoiding excessive fertilization is an important consideration for preventing excessive thatch formulation. For greens, light vertical mowing at intervals dependent on the growth rate of the plant can be effective in controlling thatch formation. Topdressing is also an effective tool to enhance the rate of biological degradation. On fairways, excessive thatch can be avoided by preventative cultural practices, such as use of appropriate turfgrass cultivars, maintaining appropriate soil pH, utilizing soil cultivation techniques to enhance soil oxygen levels, proper irrigation, moderate nitrogen fertilization, and use of pesticides only as needed. Corrective measures for thatch control, including verticutting and core aeration must be used if accumulation exceeds 1.5cm. Verticutting and core aeration are best accomplished during periods of active turfgrass growth.

## Rootzone management

Improving soil characteristics can have a positive impact on turfgrass health and can decrease the need for chemical inputs. Proper soil drainage is critical for root growth and overall turf health. Water movement through the soil is disrupted when layering occurs within the soil profile or when compacted soil conditions exist. There is no single solution to all soil problems. Methods to help solve the problem include core cultivation, high pressure water injection aeration, and deep tine aeration. It is important to determine the cause of the problem and then select the best corrective measure. Good surface drainage through surface contouring alleviates ponding of water created from runoff, although it does not correct underlying soil problems. Properly installed subsurface drainage is an effective way of keeping a golf course in play and avoiding turf damage.

## Traffic control measures

With the rising number of golfers on golf courses and the increase in the use of golf carts, traffic must be carefully monitored on the golf course to decrease potential wear and soil compaction problems. Rotate traffic patterns by planned movement of cup and tee markers. Distribute cart and foot traffic over wide areas and use cart paths where traffic is highly concentrated.

## Tree management

Trees play a strategic role in golf course design and style and are a valuable asset in the golf course landscape. Tree placement should be carefully considered and turfgrass cultural practices need to be closely monitored in shaded areas. Increase light penetration through the tree canopy by selectively thinning the crown and pruning lower tree limbs. Enhance air movement in pocketed areas by judicious removal of shrubs and trees in the avenue of prevailing winds. Along fairways and greens, root prune trees that are competing excessively with the turfgrass for water and nutrients.

## Pest forecasting techniques and equipment

Many tools are now available to the golf course superintendent to aid in forecasting potential problems on the golf course. Weather stations aid in monitoring potential weather conditions that are conducive to disease development. Diagnostic kits are available to the golf course superintendent to provide rapid, on-site test for disease detection and monitoring pathogen levels. New computer forecasting models aid the Course Manager in disease, insect and weed control applications.

## Alternative pest control measures

Biological controls regulate pests by introducing natural enemies to the turf environment to combat turf pathogens. Some biological products are now available for turf, and research shows that the potential of such products is bright. ***La Grande Mare will work closely with the soil farm here in Guernsey and implement a number of holistic practices into the golf course and landscape management. Details of which can be found at [www.soil.gg](http://www.soil.gg)***

## Spray only when necessary

There may be times when the use of a pesticide is the most effective way to control a turf problem. Select a pesticide that provides the most effective control of the weed, disease, or insect, while presenting the least possible hazard to people, wildlife and the environment. Control measures used should be evaluated periodically to determine if the desired results are being achieved, and the control plan should be adjusted if necessary. Diagnosing, evaluating and controlling a turf pest problem follows a logical sequence. Each situation is unique, however, and adjustments should be made to the overall program as circumstances change on the golf course.

## Communication and education

Communicate with and educate course officials and golfers about the IPM strategies that are taking place on your golf course and explain why they are being undertaken. Letting

golfers know you practice IPM helps them understand and accept your management decisions. Success with an IPM program depends on being alert to potential problems, following proper cultural practices, carrying through with a well-conceived maintenance plan, and selecting the best corrective measures to ensure the best quality golf course conditions with the least impact on the environment.

## Staff training and development

We will continue to develop a well-organized and efficient team-oriented staff, conscious of the cost/benefit aspects of our operation. The staff will be compensated for consistent and or above local industry standards consistent with their work ethic, dedication and efficiency.

All staff will be trained on John Deere machinery operation and preventative maintenance initially by John Deere factory representative. There after ongoing training will be carried out by Course Manager on all aspects of golf course turf equipment and workshop machinery.

Key staff weaknesses will be addressed during the appraisals and given in-house or external training.

## Equipment training and safety

- The department will comply with OSHA regulations pertaining to safety meetings and equipment operations.
- Equipment will be maintained in safe operating condition.
- Safety glasses will be required for all tasks where eyes may be exposed to any hazards.
- Steel-toed shoes will be required for specific tasks: especially rotary mowing and chainsaw operation.
- New employees will be instructed on safe operation of all equipment.
- Pesticide applications will be performed under the direction of the Course Manager

## Miscellaneous

- Members will be informed of maintenance activities through bulletin board postings and periodic articles in the club's newsletter and club's website.
- The golf course will be closed according to the stated weather policy.
- Integrated Pest Management (utilizing many options for pest control) will be a continued goal.
- Staffing: we will continue to develop a well-organized and efficient team-oriented staff, conscious of the cost/benefit aspects of our operation.

## Golf course etiquette

While implementing these standards, efforts by the golf course maintenance staff will be greatly enhanced by members and guest who practice proper golf etiquette. These efforts by all who use the golf facilities include:

- Divots made or observed by a player must be carefully replaced and pressed down. Use divot mix in the tee boxes only.
- Each player should repair at least one ball mark on every putting green.
- Players should be careful not to scuff the putting green while walking. Upon the completion of a hole, scuff marks (especially those near the hole) should be repaired out of courtesy to following players.
- Remove and replace the flagstick carefully to avoid damaging the hole or the putting green. Refrain from dropping the flagstick on the putting green.
- Footprints and club marks made in sand bunkers should be filled and raked smooth. Players should refrain from walking up the faces of sand bunkers. Enter and leave sand bunkers from the low or flat side.
  
- While players may assign caddies to do any of the previously noted tasks, it is the player's responsibility to ensure they are done and done properly.
- Do not litter the golf course. Place trash in the containers provided.
- Parents must not permit their children to run at large on the golf course or the practice putting green.
- Dogs are not permitted to run at large on club property.
- All matters relating to the golf course and its upkeep are the responsibility of Golf Course Management. Suggestions, questions and / or complaints should be made in writing. Please do not contact the Course Manager or his staff directly.
- Obey all cart instructions especially during extreme conditions. Try to use cart paths wherever they are provided and always exit fairways to the side of the cart path.
- Keep carts at least 25 yards from front of greens. Do not drive carts in areas that are steep and dangerous, use caution and common sense.

Unlike many sports, golf is played, for the most part, without the supervision of a referee or umpire. The game relies on the integrity of the individual to show consideration for other players and to abide by the Rules.