

The Chairman of Green

A Practical Guide



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1 Introduction

“... in many clubs there is often one brave soul who will battle on as Chairman until he tires of the yearly abuse thrown in his direction by impatient golfers. His thankless task includes attempting to protect his green staff from the more belligerent members, and fighting in General Committee for sufficient funds with which to manage a course”

Quote from the R&A discussion document “The Way Forward” (1989)

The intent of this practical guide is to help to make your term in office as Chairman of Green as productive and enjoyable as possible.

2 The Role of the Chairman of Green

- The role of the Chairman of Green is to liaise and work closely with the Head Greenkeeper to maintain and develop the golf course to the satisfaction of the club membership.
- It is of paramount importance that the Course Manager/Head Greenkeeper and staff are fully involved in all decisions made in regard to equipment, machinery, budgets and course maintenance practices.
- Unquestionably, the responsibility for the day-to-day management of the golf course should rest with the Course Manager/Head Greenkeeper operating to agreed policies and standards.

3 Duties & Responsibilities

3.1 In Conjunction with the General Committee and/or Green Committee:

- To formulate, if not already in existence, a Course Management Policy Document which should serve as an agreement between club and green staff detailing how the course is to be managed, the expected standards of maintenance and presentation and any future development plans for the golf course.

It is strongly recommended that every club produces a Course Management Policy Document.

A sample template of a Course Management Policy Document is provided in Appendix 1. This document aims to provide information on what should be considered for inclusion in a Course Management Policy Document. It is not an exhaustive list of contents and should only be considered as a guide.

The template can be obtained from the Golf Union of Wales in electronic format, if required, or downloaded from the G UW website www.golfunionwales.org

This document also provides a useful overview of Greenkeeping practices and activities for newly appointed Chairmen of Greens or Committee members.

To set a budget on an annual basis to meet the aims and policies contained in the Course Management Policy Document.

- The budget should take account of the 'historical' level of spend and any anticipated changes to the spend pattern.
- To produce, within the financial capability of the club, a 'rolling' programme for the replacement and purchase/lease of new machinery, to meet future requirements.
- To devise a 'rolling' course improvement programme.
- To ensure that any changes to the course e.g. the planting of trees, new bunkers etc. are within the framework of the overall club policy and in the long term interests of the club and its members.
- To ensure that the staffing level and training are adequate to maintain the course in the condition, and to the standards set out in the Course Management Policy Document.
- It is recommended that affiliated golf clubs use R&A's course management best practice website www.randa.org/en/TheGolfCourse/The-golf-course.aspx and implement best practice in the sustainable development and management of their golf course.

3.2 General Duties:

- To liaise, on behalf of the Board or Committee of Management, with the Course Manager/Head Greenkeeper on all matters relating to the management, maintenance and development of the course.
- To oversee the maintenance and presentation of the course to ensure that the expected standards are achieved and agreed course management policies implemented.
- To chair meetings of the Greens Committee at appropriate intervals.
- To report to the Committee of Management at regular intervals on matters affecting the course and its management.
- To meet regularly with the Course Manager/Head Greenkeeper, generally at least once per week, with as many meetings as possible to be held on the course, so that current conditions and problems can be viewed and discussed.
- To monitor on a monthly basis green spend against budget and investigate any significant variances.
- To advise the Match Committee, or equivalent body of the existence of such paying or other conditions on the course which require protection by Local Rule or otherwise.
- To oversee the implementation of the Winter Programme and any other alterations to the course authorised by the Committee of Management.
- To ensure that the policies in regard to course closure and the use of winter greens and other protective measures are consistently applied.
- To be familiar with the requirements of the CONGU Unified Handicapping System in regard to placement of the tee markers and preservation of the playing length of the measured golf course.

3.3 Obligations to Health & Safety:

The organisation to discharge the obligations to Health & Safety legislation varies from club to club. However, it is recommended that a check be carried out to ensure that the Club:

- Has a Health & Safety policy which satisfies current legislation and best practice.
- Displays a copy of the Certificate of Employers Liability Insurance.
- Displays a 'Health & Safety Law – What You Should Know' poster.
- Has an Accident Book or file.
- Has a qualified First-Aider able to deal with emergencies.
- Provides and maintains an adequate number of first aid kits.
- Provides and maintains adequate fire extinguishers.
- Provides adequate facilities for the welfare of the Greenstaff.
- Has a secure store for the safe storage of chemicals.
- Has a procedure for the safe storage, use and disposal of pesticides.
- Has a secure store for the safe storage of fuel.
- Has an emergency procedure.
- Has a procedure for disposing of hazardous waste and controlling spillage/leakage.
- Provides personal protective equipment where necessary.
- Carries out Risk Assessments for all relevant Greenkeeping activities.
- Keeps records of the following:
 - Staff Training and competency.
 - Risk Assessments.
 - COSHH, Noise and manual Handling Assessments where appropriate.
 - Inventory of Greenkeeping equipment and machinery.
 - Maintenance records for machinery.
 - Pesticide stock list and usage.

The above list is not exhaustive and it is the responsibility of the Golf Club to keep abreast of changes in legislation and to make adequate provision to comply with Health & Safety requirements.

The GUW through Xact Advice offer a standardised Safety Management System that can be used by all clubs affiliated to the Golf Union of Wales. This system promotes standardised Health and Safety Management throughout golf. <http://guw.xactadvice.co.uk/>

3.4 Capital Equipment Provision/Rolling Programme:

- To plan for replacement of capital equipment, machinery upgrading and purchase/lease of new machinery. It is suggested that a five-year 'rolling' programme be operated.
- Likewise it is recommended that a sum of money is set aside each year in a Development Account for the express purpose of funding the 'rolling' capital equipment programme.

3.5 Training:

- All staff must be trained and be competent for the tasks they are required to perform. Records of training and competency must be kept. Training needs should be reviewed at least annually.
- Within reason, qualified staff should be encouraged to attend lectures, demonstrations and seminars on Greenkeeping matters where these are considered to be of potential benefit to the club or the personal development of the staff.
- Members of staff should be encouraged to be members of BIGGA. This membership incorporates a Continuing Professional Development (CPD) Scheme.

3.6 Communications:

- Members must be informed of any application of a chemical substance with a hazard to health.
- It is important that members are aware of the fact that to maintain a golf course to the desired standard, work has to be undertaken at times that will cause inconvenience and disruption to play.
- To minimise frustration and adverse comment members should be advised in advance of any course maintenance operation that is likely to disrupt play e.g. verti-draining, hollow coring and top dressing applications.
- The contents of major projects such as the Winter Programme should be communicated to the club members for information by newsletter or via the club notice board.
- Documents such as the Course Management Policy Document and Environmental Management Plan, if appropriate, should be made available to the club membership.
- Members should be made aware of the club arrangements to discharge its obligations to Health and Safety legislation and any safety matters that could affect them personally.
- To educate members in matters affecting the golf course, consideration should be given to holding, from time to time, an 'open forum' with members.

3.7 Course Closure:

- It is prudent to have clear responsibilities laid down in regard to closure of the course and its re-opening. It is recommended that during the working week this is the responsibility of the Course Manager/Head Greenkeeper. If at weekends and staff holidays, members of the greenstaff are not present, it should be the responsibility of the Chairman of Green or nominated Committee members, operating to guidelines determined by the Course Manager/Head Greenkeeper. (A consistent interpretation of the conditions affecting course closure/opening is key).
- In the event of closure, notice(s) should be displayed in a prominent position(s) to inform members and should, where practicable, indicate the time of the next course inspection.
- A log should be kept of dates of course closure and the reason. This provides factual evidence of 'problem areas' on the course possibly requiring rectification.

3.8 Competition Days:

- A policy should be defined identifying the extent of course preparation for competition days e.g. greens cut either on the morning of the competition or cut during the preceding day and 'switched' before play commences to remove surface water.
- Under normal circumstances it should be the expectation that new holes will be cut for each competition. In the event of an unfavourable weather forecast holes should be positioned on higher ground.
- Bunkers should be raked and the presence of flagsticks and tee markers checked.
- Greenstaff should be made aware that in compliance with the CONGU Unified Handicapping System requirements, no tee markers should be more than 10 yards in front of, or behind, the Permanent Distance Marker on each hole and the total change to the measured playing length of the golf course must not exceed 100 yards.

3.9 Environment:

- It is recommended that, if not already in operation, an Environmental Policy Document is produced for your golf course and encapsulated within an Environmental Management Plan.

Section 4 Questions Frequently asked of a Chairman of Green

In your role as Chairman of Green you will be asked many questions regarding the course and its upkeep. The questions are likely to include some of the following:

Why is aeration and top dressing with the associated disruption to play necessary?

Aeration is a means of combating compaction, improving drainage and creating favourable conditions promoting healthy grass growth. By allowing ingress of air it assists in the breakdown of thatch and promotes deeper and stronger rooting. Aeration treatments such as hollow coring followed by top dressing allows 'soil exchange' whereby poor compacted soils are in part replaced by freer draining mixes of soil and sand.

Although generally unpopular with golfers because of the temporary disruption, aeration is an extremely important maintenance practice.

The timing of aeration is important and is often best carried out when the greens are dry and perceived by members to be in prime condition.

Top dressing with sand or free draining alternative usually complements the aeration process by filling the holes. Top dressing in addition dilutes thatch and provides firmer greens as well as truer putting surfaces.

It is important that club members recognise that greenstaff, by carrying out regular aeration, are doing exactly what is necessary to promote the long term health of the turf.

What is thatch and how can it be controlled?

Thatch is a layer of organic matter (leaves, stems, roots etc) in various stages of decay lying on top of the soil.

It is associated with excess growth combined with a reduction in decomposition. Excessive thatch accumulates when the input of dead turf residues exceeds the rate of microbial breakdown.

Thatch accumulation is favoured by excessive fertilisation, high levels of irrigation and compaction resulting in poor surface drainage inhibiting the microbial activity that should be decomposing the thatch.

In wet weather thatch acts like a sponge producing soft, heavily foot printed greens and water logged fairways.

Thatch can be controlled by a combination of several mechanical turf maintenance practices applied at the appropriate time, including hollow coring, scarification and top dressing together with the minimum application of fertiliser and irrigation water.

Professional golf is played on greens reading around 10'. Why are our greens so slow?

Speeds of 10 feet on a Stimpmeter are for tournament play and are not generally suitable, nor sustainable, for normal club golf. In summer conditions green speeds can be categorised as:

Fast	8'6" or greater
Medium – Fast	7'0" – 8'0"
Medium – Slow	6'6" – 7'0"
Slow	6' or less

Links courses are generally approaching the highest category with the majority of other courses being in the middle categories.

The quest for ever faster greens can result in overstressing the turf resulting in weak growth and domination of annual meadow grass.

(The Stimpmeter is a 36-inch long, aluminium tool designed to make a standard measurement of green speed. At one end is a ball release notch that is designed so that a golf ball will always be released and start to roll when the Stimpmeter is raised to an angle of approximately 20 degrees to horizontal. A Stimpmeter reading is a distance measurement in feet and inches. Green speed is determined by selecting a flat area of green, rolling a ball in one direction then in the opposite direction and averaging the two measurements.)

Yardages to the green target have become very important in golf these days. Is there a rule regarding distance markers?

Unfortunately the colour and placement of markers on the fairway to indicate the distance to the centre of green 'target' has not been standardised. However, the most popular coloured markers are:

White	200 yards
Yellow	150 yards
Red	100 yards.

These configurations are strongly recommended.

Are there any rules regarding hole locations and how far they should be from the edge of the green?

This is no rule regarding hole locations and therefore a particular hole location cannot be declared to be illegal. There are, however, guidelines directed at producing fair results. Holes should be located at position at least five yards from any edge of the green where there is a two to three feet radius of reasonably level putting surface. It should be possible for a player above the hole to stop the ball at the hole. Good judgement is necessary and hole locations should not be 'tricked up'.

Should bunker rakes be placed inside or outside of the bunker?

There is no set rule as to where rakes should be placed. The recommendation of the R&A is that rakes should be left outside bunkers in areas where they are least likely to affect the movement of the ball. This matter is discussed in detail in Decision Misc./2 in the R&A publication Decisions on the Rules of Golf.

Why have the Committee allowed the removal of trees around some of our greens and tees? Surely, this is sacrilege?

To improve the hours and level of sunlight exposure and air movement essential for growth, it may be necessary, from time to time, to cut back, or remove completely, trees close to or overhanging greens and tees. Where trees and shrubs are too close to playing surfaces growth is often weak resulting in unacceptable wear and tear. When trees are being planted consideration should be given to their future size.

I have heard the term 'Green Creep'. What does it mean?

When a green keeper cuts greens it is considered important for aesthetic reasons to prevent 'scalping' of the adjoining collar. Little by little the 'safety margin' to ensure this, results in a reduction in the green dimensions and can become many feet over a period of time. This phenomenon is termed 'green creep'. On small greens the consequence is a reduction in suitable pin positions and increase in compaction.

The effect can be controlled by recording the desired green dimensions and periodically restoring affected greens to the required size.

The same phenomenon affects fairway width and tee dimensions and similar controls should be exercised.

Appendix 1

Golf Course Management Policy Document Template

SECTION A

INTRODUCTION, PURPOSE AND PRINCIPAL OBJECTIVES

1. Introduction

The following document is a sample template of a Course Management Policy Document. It should be used by the Greens Committee as the basis to establish a Course Management Policy Document that meets the needs of your golf course and facilities.

- Section A – Introduction, Purpose and Principal Objectives
- Section B – Course Administration
- Section C – Course Maintenance Policies
- Section D – Course Development Programme
- Section E – Environmental Management Plan

2. Purpose

- 2.1 To specify the responsibilities and procedures for the management of the golf course.
- 2.2 To outline the key elements to allow the course to be maintained and developed to agreed standards.
- 2.3 The Course Management Policy having been agreed by the Committee of Management and Greenstaff members should be strictly followed and supported.
- 2.4 The Course Management Policy will be reviewed regularly (perhaps annually). If any modification is required it must only be done after wide consultation with greenstaff, greens committee, and the agronomy consultant.

3. Principal Objectives

- 3.1 To continue to maintain the golf course, in the playing season, to the high standard set in previous years.
- 3.2 (Any future aims or desires of course management should be inserted here. For instance, improve winter playing condition, reduce disease incidence, improve spring pickup, enhance fairway drainage, restore heather etc.)
- 3.3 To promote the finer bent and fescue grasses and reduce pesticide, water and fertiliser use by implementing appropriate cultural and mechanical operations.
- 3.4 To manage the course in accordance with the R&A Golf Course Committee's definition of Sustainable Golf Course Management.

Agreed by:
(For Greenstaff)

.....
(For Committee of Management)

Date:

SECTION B

COURSE ADMINISTRATION POLICY

The Golf Course Management Policy Committee will comprise:

- Course Manager/Head Greenkeeper
- Chairman of Green
- Assistant Chairman of Green
- Nominated members of the Committee of Management
- Any club members deemed to have experience relevant to this function

The Golf Course Management Policy Committee will meet several times a year. For example...

- Shortly after the AGM to review the course maintenance policy for the forthcoming season.
- In August/September to select projects from the Course Development Plan for the Winter Programme.
- To consider course maintenance budget and capital equipment requirements.

1. The purpose of the Golf Course Policy Committee

- 1.1 To review the Course Administration and Maintenance Policy on an annual basis and make recommendations to the Committee of Management for change or modification as deemed necessary.
- 1.2 To consider and recommend to the Committee a five year Course Development Plan. The winter work programme will consist of projects outlined in this Plan. This will ensure all Course Development projects completed are within the overall club policy and in the long-term interests of the Club and its members.
- 1.3 To analyse machinery upkeep and breakdown costs and monitor viability and make recommendations to the Committee with regard to replacement and purchase of new equipment to meet future needs.
- 1.4 To consider on an annual basis the budget for course upkeep prior to the end of the financial year so that a realistic budget can be set and controlled by the Committee.

2. Roles & Responsibilities

2.1 Role of Chairman of Green

- To liaise, on behalf of the Committee of Management, with the Course Manager/Head Greenkeeper on all matters relating to the maintenance of the golf course.
- To oversee the maintenance of the course to ensure that standards are maintained and agreed policy implemented.
- To report to the Committee of Management at monthly meetings on matters affecting the course.
- To call meetings of the Golf Course Policy Committee at specified intervals.
- To meet regularly with the Course Manager/Head Greenkeeper, generally at least once per week, as many meetings to be held on the golf course as possible, so that current conditions and problems can be viewed and discussed.
- To advise the Match Committee of the existence of such playing or other conditions on the course which require protection by Local Rule or otherwise.

- To oversee the implementation of the Winter Programme in accordance with the Course Development Plan and any other changes to the course when authorised by the Committee.
- To advise the Committee of Management of the staffing level and the training needs required to maintain standards and implement the Course Administration and Maintenance Policy.

2.2 Role of Course Manager/Head Greenkeeper

- To maintain the course in accordance with Golf Course Management Policy.
- To manage the Greenkeeping staff and discharge the duties as defined in the Course Manager/Head Greenkeeper job description.
- To determine the daily work programme and allocate tasks to the Greenstaff accordingly.
- To ensure that the Greenkeeping operation in all respects is carried out in accordance with the Health and Safety Policy of the Club.
- To keep abreast of developments in Greenkeeping machinery and play a key part in the formulation of the capital rolling programme.
- To liaise with the Chairman of Green, as necessary, on all matters affecting the course.
- To liaise with the Secretary on administrative and disciplinary matters.
- To maintain records as necessary

3. Health and Safety

- 3.1 To ensure that the Club's Health and Safety Policy complies with Government legislation.
- 3.3 To ensure that the policy is reviewed annually by audit.
- 3.4 To ensure that the greenstaff are provided with all necessary protective equipment. It is incumbent upon the staff to wear the equipment for those tasks specified.
- 3.5 To ensure that the greenstaff only undertake work for which training has been provided. They must not undertake any work they consider to be unsafe.

4. Capital Equipment Provision

- 4.1 To provide the replacement of capital equipment and equipment upgrading. This is an integral part of the Finance and Development Committee remit. It is suggested that a five-year rolling programme be operated.
- 4.2 The Chairman of Green will be a member of that Committee.
- 4.3 To see that a sum of money is set aside each year in the Capital Development Account for the express purpose of funding the purchase of major items of greens equipment either as replacements or additional items.

5. Control of Revenue Account Expenditure

- 5.1 The greens expenditure budget shall be set at the start of the financial year taking account of the previous years' spend and any anticipated changes to the spend pattern.
- 5.2 Expenditure shall be monitored on a monthly basis by means of the 'expenditure to budget' control exercised by the Treasurer. Variance to budget will be investigated.
- 5.3 The Course Manager/Head Greenkeeper has the authority to purchase consumable items such as sand, seeds and fertilisers and sanction machinery repairs. He is, however, accountable for operating within budget constraints. In this regard, close liaison with the Chairman of Green is necessary.

6. Record Keeping

6.1 The Course Manger/Head Greenkeeper should maintain a record of...

- All fertilisers, pesticides, fungicides and herbicides applied to the course. The record should contain details of date of application, quantity applied, area treated and personnel carrying out the application. Such records must satisfy all requirements of the relevant Pesticide Legislation.
- Date of placing of order, and receipt of, major purchases including sand, fertilisers and pesticides.
- Items of machinery sent for overhaul and repair and details of the work carried out. A detailed service and repair record should be maintained for each major item of machinery.
- Staff training carried out internally and externally.
- Any accident or incident affecting the health, safety or well-being of the staff.
- All products such as pesticides bearing a COSHH hazard warning sign. Details of quantities stored should be available at the Chemsafe.
- Personal Protection Equipment issued to staff and details of periodic inspection.

6.2 Staff should maintain a daily log of the work carried out on the form provided for the purpose.

7. Training

- 7.1 Training of staff should be considered as 'on-going' and the Club will assist in any reasonable way in their participation in Greenkeeping related courses.
- 7.2 Qualified staff should be encouraged to attend lectures, demonstrations and seminars on Greenkeeping matters considered to be of potential benefit to the Club and will be allowed time off work, normally with pay, to do so.
- 7.3 It shall be a condition of employment that apprentices attend 'college' and successfully pass relevant examinations or assessments.
- 7.4 The Club will encourage active membership and participation in BIGGA matters.

8. External Consultants

- 8.1 A decision should be taken on an annual basis in regard to an Advisory Visit by a recognised agronomist.
- 8.3 Following the visit of an agronomist and receipt of his report it will be necessary to review Section B of this document to take account of any recommendations made.

9. Communication with Members

- 9.1 Members must be informed of any application of a chemical substance with a hazard to health.
- 9.2 Members should be warned in advance of any course maintenance operation that is likely to disrupt play e.g. Verti-draining or hollow coring. This is the responsibility of the Secretary/Manager in conjunction with the Chairman of Green/Head Greenkeeper.
- 9.3 The contents of the Winter Programme should be communicated to Club members. Similarly the membership should be made aware of the Course Management Policy Document and, periodically, the progress on its implementation.

- 9.4 The members should be made aware of the Club arrangements to discharge its obligations to Health and Safety legislation and matters that affect them personally.
- 9.5 It is also important that members be made aware of the fact that to maintain the course to the desired standard, work has to be undertaken at times that will cause inconvenience and disruption to play, e.g. aeration and top dressing programmes.
- 9.6 The contents of Agronomy Reports should be communicated to the Members and the Greens Committee should consider displaying copies of agronomy reports within the clubhouse for members' reference.

10. Course Development

- 10.1 A five year programme for Course Development should be drawn up by the Golf Course Management Policy Committee and endorsed by the Committee of Management.
- 10.2 Each year projects outlined in the Course Development programme will be selected and carried out as the Winter Work Programme.
- 10.3 The content of the annual Winter Work Programme should be made available to Club members.

11. Competition Days

- 11.1 The Course Manager/Head Greenkeeper will be provided with a fixture list annually on its publication by the Secretary and it is his responsibility to ensure that satisfactory arrangements are made for all competitions held at the Club.
- 11.2 For nominated competitions the greens will be cut on the day of the competition. Otherwise the greens will be cut during the preceding day and 'switched' on the morning of the competition.
- 11.3 Under normal circumstances it is expected that new holes will be cut for each competition. If there is rain in the early morning of a competition a check should be made for flooding. Any holes under water, or likely to become under water should be changed to higher, drier ground.
- 11.4 The presence of all flagsticks should be checked.
- 11.5 All bunkers should be raked.
- 11.6 In compliance with the CONGU Unified Handicapping System requirements no tee marker should be more than 10yds in front of, or behind, the PERMANENT DISTANCE MARKER and the total change to the measured playing length of the golf course must not exceed 100 yds.
- 11.7 On days of heavy dew 'switching' should be carried out as follows:
- Teeing areas.
 - Green surrounds – to remove tyre marks from greens cutting machinery and disperse cuttings and moisture.

12. Use of Pesticides

- 12.1 Pests should be controlled as far as possible by cultural and mechanical means.
- 12.2 When application of a pesticide is necessary, i.e. incidence is beyond the stated tolerance threshold, spraying must be strictly controlled in compliance with the Pesticide Regulations using approved substances.
- 12.3 Spraying must only be done by persons deemed 'competent' under the provisions of the regulations using approved personal protection equipment.
- 12.4 Spraying should not be carried out in windy conditions and contamination of watercourses must be strictly avoided in accordance with a 'no spray zone' policy i.e. spraying should not be carried out within 20 feet of a watercourse.

- 12.5 A notice must be posted notifying members and visitors of the hazard on each occasion a substance with a health hazard applied.

13. Closure of the Course

- 13.1 The only reason for course closure should be adverse weather conditions.
13.2 The Course Manager/Head Greenkeeper, or his deputy, has full authority for declaring the course closed and for its re-opening.
13.3 In the absence of an authorised member of staff the decision to close or re-open the course will be taken by the Chairman of Green or nominated Committee Member.
13.4 In the event of closure, notices should be displayed to inform members and should, where possible, indicate the time of the next course inspection.
13.4 A log should be kept of course closure and the reason.

14. Security

- 14.1 All relevant security measures must be deployed at the end of each working day.
14.2 The workshop must be locked when not in use and the shutter doors closed when greenstaff are operating on the course.
14.3 Keys must not be left in the ignition of any vehicle when unattended.

15. Storage

- 15.1 All hazardous chemicals must be stored in the Chemsafe, the contents and quantities of which must be listed and displayed.
15.2 Fertilisers should be stored on pallets and kept off the ground.
15.3 Sands, top dressings and path covering materials should be stored in the compound provided, ensuring that the various materials are kept apart. Top dressing should be kept as dry as possible.

16. Resources

- 16.1 Regular review of staffing levels should be conducted.

17. Complaints

- 17.1 No complaint on any matter relating to the conduct of the staff or condition of the course should be made directly, or by innuendo, to any member of the Greenstaff.
17.2 All complaints and comments should be made to the Secretary or Chairman of Green.
17.3 Where appropriate, such complaints shall be requested in writing and brought before the Committee of Management for their consideration.

SECTION C

GOLF COURSE MAINTENANCE POLICY

1. Greens

1.1 Maintenance objectives

- The aim of maintenance is to provide firm, smooth and true greens that remain playable throughout the year and are economically and environmentally sustainable. To fulfil this aim, we encourage the finer grasses at all times.

1.2 Promoting the finer grasses

- The Club is committed to encouraging the finer grasses such as bent and fescue on the greens and the reduction in the proportion of annual meadow grass. This will reduce the vulnerability of the greens to Climate Change, stricter pesticide legislation and tighter water use. It will also provide consistent year round golfing surfaces.
- To promote these grasses, the following policy for the management of the greens has been agreed.

1.3 Fertiliser and irrigation

- The main aim is to keep productivity as low as possible. This means restricting water and fertiliser inputs to a minimum, i.e. only enough to provide uniform growth.
- Fertiliser is only applied to keep the surfaces uniform never to provide good colour.
- Unless otherwise advised by our agronomic advisors, fertilisers in general will be nitrogen based with little or no phosphate.
- Watering should not be carried out with the intent of producing soft amenable 'targets'. Water will only be applied to keep the turf alive, never to make the greens more receptive.
- To optimise water penetration and provide uniform surfaces, wetting agents will be used.

1.4 Aeration and top dressing

- Regular aeration will be carried out when required throughout the year by an appropriate method. An outline aeration programme is documented below but the intensity and frequency of work is subject to weather, ground conditions and growth.
- Weekly slit tining normally between October and March.
- Fortnightly Sarel rolling during the playing season
- Monthly/six-weekly solid tining during the playing season.
- Verti-draining normally in the early autumn and early spring.
- Hollow coring normally in the spring and autumn as necessary. The autumn operation should be carried out during strong growing conditions. This normally means no later than mid-September.
- Top dressing will consist of (insert as relevant) Regular laboratory analysis will be carried out to monitor its quality.
- The aim is to apply (insert as relevant) of top dressing to all 18 greens during the course of the growing season. Regular light dressings should be applied in summer and heavier applications directly after coring operations. It should never be applied so as to smother the turf.
- Top dressing should only be applied during growth so the material can be rapidly absorbed into the turf. It should be gently worked into the base of the turf using means to minimise damage to the turf.

- After every coring operation the holes should be filled with fresh top dressing.

1.5 Surface refinement

- To promote the finer grasses it is essential to minimise the disturbance pressure on the turf. This means refining the surface gently and never aggressively.
- Mowing will be carried out when required. During strong growth this should be daily.
- Hand mowing will be undertaken as frequently as possible.
- When using the triplex mower, the final perimeter cut will be missed out a couple of times a week to minimise wear through scarring/scriving.
- A sensible height of cut will be established, at which healthy turf, stress-free turf can be maintained.
- Gentle verti-cutting will be implemented as required. This should be complemented with light grooming and brushing.
- Light top dressing mentioned earlier will provide a smooth and true surface.

1.6 Green speed

- To provide greens of reasonable speed without imposing undue pressure on the turf the club will roll, top dress and brush rather than cut low and intensively verti-cut.
- The speed will be controlled by use of a Stimpmeter. The object is to provide greens reading 7-8 feet on the Stimpmeter at the height of the playing season and no slower than 6 feet at other times.

1.7 Hole cutting and changing

- To ensure that holes are not crowned when cut it is mandatory to use either a board or a hole cutter with a flange attachment. The position of holes for competitions is at the discretion of the Head Greenkeeper.
- If rain is forecast it would be prudent to cut holes in high spots. This should be borne in mind by staff preparing the course in the morning of competitions.
- Holes should be changed at least twice a week.

1.8 The growing environment

- Where vegetation shades greens it is the policy to limit their negative influence by appropriate pruning/removal.

1.9 Over seeding

- To further the aim of increasing the promotion of finer grasses, it is the Club policy to over seed the greens twice a year with an appropriate seed mix. High quality cultivars will be used at all times.

2. Tees

- 2.1 The aim is to provide a firm, level and well-grassed teeing platform on each hole.
- 2.2 To accomplish this objective, the maintenance programme should involve regular aeration, controlled feeding and top dressing.
- 2.3 The mowing height is normally in the range 8-10 mm. Tees shall be mown at least twice a week.
- 2.4 Divot marks should be restored weekly using a mix of sand/loam/seed.
- 2.5 Other than medal tees, the tee markers should be progressively moved back (or forward) in a planned fashion so that a teeing area once used can be top dressed, seeded and rested.

- 2.6 Full use should be made of those tees affording an alternative route to the hole so as to minimise wear and tear of the walk-off areas. This is particularly important in the winter months.
- 2.7 Permanent distance markers should be maintained such that they are clearly visible.

3. Fairways

- 3.1 The fairway width should be less than forty yards at par four and five holes.
- 3.2 It is desirable to develop some shape and form to the fairway cutting and so avoid 'straight lines'. Once the desired contouring has been established it is important that the member of staff cutting the fairway preserves the agreed line. The 'agreed line' should be established before the first cut of the season.
- 3.3 The need for fairway weed control should be assessed on an annual basis. Spot or localised treatment is much preferred to an overall application. It is preferable that spraying is carried out at the start of the growing season before weeds flower and seeds form. This should minimise the incidence of weeds the following year.
- 3.4 Likewise the need for worm control should be assessed on an annual basis. It is particularly important that worm casting be controlled in the autumn if necessary to avoid muddy fairways and weed seed 'beds'.
- 3.5 Lime should never be applied to fairways.
- 3.6 In periods of wet weather and vigorous growth it may be necessary to disperse grass cuttings to provide presentable playing and aesthetic conditions.
- 3.7 Deep aeration will be required on at least an annual basis to improve surface drainage. Scarification and localised sand dressing may also be required.
- 3.8 Irrigation application may be required should only be applied to keep the turf alive.

4. Bunkers

- 4.1 Bunkers should be raked on a daily basis. Any stones or other debris should be removed. This should include the practice bunkers(s).
- 4.2 A constant monitor should be kept on the level of sand in the bunkers and on their 'playability'. The need for topping up a bunker with sand should be brought to the attention of the Course Manager/Head Greenkeeper by those members of staff maintaining bunkers on a daily basis.
- 4.3 When bunkers are 'topped up' the sand should be consolidating to reduce the likelihood of the ball 'plugging'.
- 4.4 Approved bunker sand with a controlled particle size from a reputable supply source should be used.
- 4.5 The design of the bunkers should be in accordance with the character of the course.

5. Semi-Rough

- 5.1 The purpose of semi-rough is to punish the wayward shot and so reward the straight hitter. This should be done mindful of the searching for golf balls and impact on the speed of play. It should be the intent to 'reward' the player playing from the fairway.
- 5.2 Semi-rough should therefore be maintained at a height where there is a reasonable expectation that the ball will be found but the next shot will be significantly more difficult than from an equivalent position on the fairway.
- 5.3 For operation reasons semi-rough must be maintained within a 'range'. A satisfactory range has proved to be 2-3".

- 5.4 It is vitally important that care be exercised when cutting among trees to avoid damage to the tree trunks as damage so inflicted leads to disease and curtailment of the lifespan of any tree so affected.

6. Out-of-play areas

- 6.1 The natural vegetation type to the course will be promoted at all times. This should involve appropriate maintenance as instructed by a qualified ecologist.
- 6.2 It is the policy to minimise unnecessary cosmetic mowing to out-of-play areas, as this will save time and fuel. It will also provide a more natural look.

7. Trees

- 7.1 To allow full development of growing trees it is necessary to 'thin out' certain trees particularly in 'plantations'.
- 7.2 Natural regenerating species such as hawthorn require to be rigorously controlled.
- 7.3 Tree management should be considered annually at the setting of the Winter Programme.
- 7.4 Consideration should be given regularly to the replacement of old or dying trees in strategic golfing positions so that the replacement tree(s) can be established before the original requires to be removed.
- 7.5 Care should be exercised when planting in vicinity of tees or greens to ensure that when the tree or shrub is fully developed it does not create excessive shade or deny the required circulation of air to the tee or green.
- 7.6 Broad –leafed and/or conifer species such as sycamore, chestnut, cherry and Sitka spruce should be avoided. Native species such as birch, oak, Scots Pine and beech are more desirable.

8. Irrigation System and Water Quality

- 8.1 The prime function of the watering system is to allow survival of the grasses on the greens and surrounds in times of relative drought. It should not be used to provide 'target golf'.
- 8.2 The green and tees are the only playing surfaces irrigated. This constitutes 5% of the total playing area of the golf course.
- 8.3 Our total average annual water usage is (insert as relevant).
- 8.4 It is not advisable to use the system in the cold dry conditions of early spring as the cold wet greens so provided inhibit growth.
- 8.5 It is important that the watering system be tested in early spring to ensure that it is in working order for the incoming season.
- 8.6 To protect the system, it should be drained to the lowest point in autumn before the onset of frost.
- 8.7 Hand watering should be implemented as necessary to minimise the use of the automatic system.
- 8.8 Water quality should be monitored on an annual basis.

9. Winter Golf

- 9.1 Temporary greens should only be used in times of hard frost, thawing conditions or abnormal rainfall.
- 9.2 Temporary greens should be prepared on suitable relatively flat areas of the fairway in the month of September. They should be progressively cut down and lightly

scarified to provide acceptable putting surfaces. The green areas should be white lined to provide positive definition.

- 9.3 Alternative natural turf winter teeing grounds will be used where possible during the winter period including medal competitions.
- 9.4 The need for fairway protection should be reviewed on an annual basis.

10. Traffic management and course protection

- 10.1 The need for fairway protection should be reviewed on an annual basis.
- 10.2 Provision will be made to provide alternative traffic routes for summer and winter play. This will spread wear.
- 10.3 White lines and ropes shall be used to protect sensitive parts of the course. The Course Manager and Chairman of Green will implement protection measures as they see fit.
- 10.4 It is the responsibility of all golfers to repair their own pitch marks and replace their divots.

11. Additional Duties

- The greenstaff are responsible for maintaining the paths and grassed areas fronting the Clubhouse. The grassed areas should be weed free and grass clippings removed. It is important that these areas are routinely maintained to a high standard as they create the initial impression of the club and course.
- Collections of grass at the shoe cleaning point should be removed on a daily basis.
- The course should be 'toured' on a weekly basis (or more frequently if required) to collect discarded cans, bottles and other debris.
- Bins at tee boxes should be regularly emptied particularly before and after weekend play.
- A weekly check should be carried out on the boundary fences or walls, with repairs carried out as necessary.

SECTION D

SPECIMEN COURSE DEVELOPMENT PLAN

In order to provide continuity regarding Course Development, the following provides a list of projects that have been drawn up for completion over the next five years.

The priority projects each year will be decided by the Golf Course Policy Committee and implemented as part of the annual Winter Programme.

(Please note the following are provided as examples. A real working document will have much more detail).

1. Drainage installation

- 1.1 Install pipe drainage into 7th fairway and install cut-off drain to right side of 3rd green.

2. Tee enlargement/levelling

- 2.1 Level tees on 3rd.
- 2.2 Enlarge ladies tee on 15th.

3. Tee Construction

- 3.1 Construct new tee on 14th.

4. Bunker renovation

- 4.1 Re-face bunkers on 13th, 16th and 18th holes.

5. Pathway installation/restoration

- 5.1 Install pathway from 6th green to 7th tee.

6. Materials and Methods

- 6.1 All materials used in course construction projects should be of high quality and be approved for use.
- 6.2 Tried and tested methods of construction, drainage or irrigation installation should be followed at all times.
- 6.3 All projects should be carried out when ground conditions are suitable.
- 6.4 The relevant Health & Safety guidelines should be followed at all times in accordance with the Club's Health and Safety policy.

7. External advice

- 7.1 Advice should always be sought from professional external consultants before any project commences to ensure the best quality results are obtained.

SECTION E

ENVIRONMENTAL MANAGEMENT PLAN

The following areas should be included in this section.....

- Environmental Management Planning
- Wildlife and Habitat Management
- Landscape and Cultural Heritage
- Waste and Energy Management

Each area is entirely Club specific. Therefore, to provide sufficient detail under each heading requires thorough consultation with an appropriate qualified Golf Course Ecologist.

Appendix 2



R&A Sustainable Golf Course Management and Development

What is sustainability?

The R&A Golf Course Committee has defined sustainable development and management as:

Optimising the playing quality of the golf course in harmony with the conservation of its natural environment under economically sound and socially responsible management.

This has to be a continuous goal and we should all be asking:

- Are we currently sustainable?
- Could we be more sustainable?
- Will we be sustainable in future years?

The sustainability ladder

Climbing the sustainability ladder is all about improving the golfing experience; providing better value for money, better year round playing surfaces and, at the same time, reducing the environmental impact of course management. However, it requires the commitment and support of the club so as not to shake the ladder as you attempt your ascent. This necessitates continuity within the course management structure and the provision of a Course Management Policy Document to provide stability during times of change in personnel.

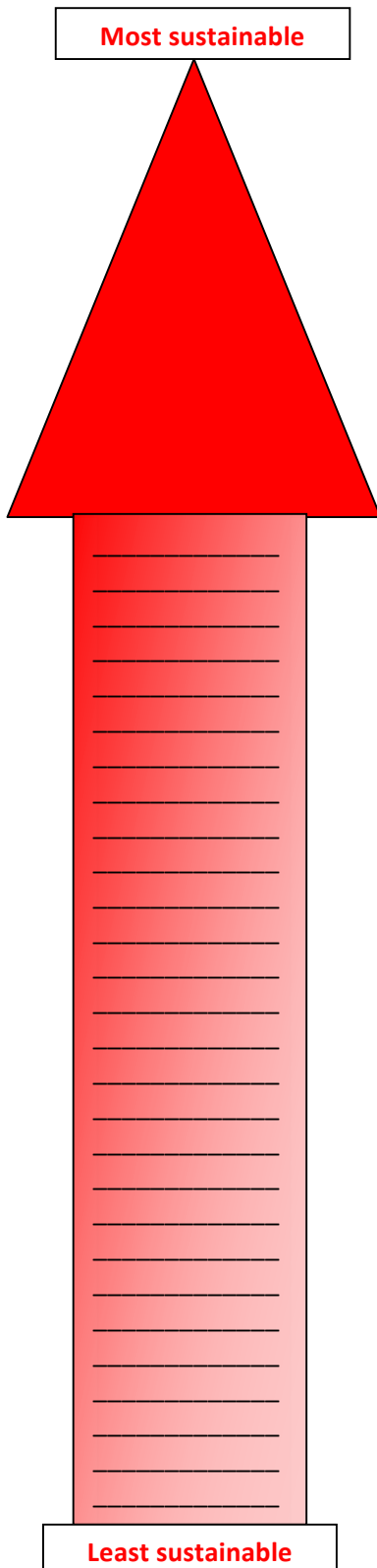
The basic principles of progressively improving turf health to climb the ladder apply to all areas of the golf course: developing drier, firmer turf with good access to sunlight and air movement. Putting greens, whatever their species composition and construction, can be considered sustainable if they fulfil the playing quality, environmental, financial and social constraints noted in our definition. These parameters will vary depending on climate, budget, legislation (pesticide and water, for example), drainage and many other factors. In any situation there will be the opportunity to become more sustainable by improving on aspects of these constraints or to become less sustainable by moving in the other direction.

The same applies to all other areas of the golf course. Improving drainage to fairways through thatch reduction and enhanced water movement through the soil will result in better playing conditions, particularly over the autumn and winter months when soft, wet fairways result in playing restrictions and other problems such as worm casting. Firm, dry teeing grounds, of adequate size and not in a shaded environment, will provide a superior surface for play. Bunkers that are more akin to small ponds over winter, or ones with badly eroding banks, will do nothing to encourage golfers to renew a subscription or pay a visitors green fee. Rough that is graded to present a fair challenge, maintained to thin out jungle grassland and managed to increase habitat and wildlife diversity will improve the overall golfing experience.

Achieving greater sustainability is all about developing the environment for healthier turf and is a constant challenge for everyone. To make progress, it is important to assess the current level of sustainability of the course and to gauge its potential for climbing the ladder, not only in terms of how far limiting factors will allow you to climb but also at what pace the climb can be achieved. Set realistic goals; climbing a couple of rungs could be a considerable achievement, at which point it may be necessary to reassess the potential to climb higher.

The rungs of the sustainability ladder

For the more intensively maintained areas of the golf course, such as greens, their surrounds, fairways and tees, the grass species composition of turf provides an excellent biological indicator of progress up the sustainability ladder and the seven steps towards greater sustainability can be described thus:



Step 7

a fescue/browntop bent sward is attained but needs careful management to avoid sliding down the ladder.

Step 6

as firmness, dryness and airflow continue to improve, the odd patch of fine fescue appears and a mixed sward develops with browntop bent and increasingly annual meadow-grass in the minority. Introducing fescue into the over seeding regime may well be required.

Step 5

browntop bent begins to dominate a blend with annual meadow-grass. A fairly intensive over seeding programme may be necessary to make this step or, at the very least, to increase the rate of the climb.

Step 4

browntop bent begins to increase but annual meadow-grass remains in a high proportion. Over seeding may be necessary to achieve this step.

Step 3

thatch under control, shade adequately reduced, still annual meadow-grass but native browntop bent beginning to become established.

Step 2

firmer with thatch being checked and shade reduced but still annual meadow-grass dominated.

Step 1

wet, soft, thatchy turf dominated by annual meadow-grass, in shade and subject to regular disease attack. Drier, firmer turf in less shade has to be developed if you are to start climbing the ladder.

Throughout this process it is necessary to monitor progress and the work being put in to achieve each step on the climb. At some sites, it may not be possible to get beyond a certain step on the ladder, e.g. due to drainage or shade constraints which simply cannot be overcome. This may limit the sustainability of the site in terms of playability and income generation. Future climate change and regulations, e.g. water or pesticide availability, may remove one or two of the lower rungs of the ladder in terms of their sustainability and this possibility should be factored into long term planning.

Sustainable course management is not an option, it is essential to ensure that our golf courses will be enjoyed by future generations.

For more information about sustainable management through the implementation of best practice visit www.randa.org/en/TheGolfCourse/The-golf-course.aspx

Appendix 3



Disturbance Theory

The term 'Disturbance Theory' is regularly being referred to within Greenkeeping circles. What is disturbance Theory?

The Disturbance Theory aims to promote the creation of the right environmental conditions that encourage the finer bent and fescue grass species to predominate, specifically on golf greens, without compromising playing quality. The theory outlines that each grass species has evolved and adapted to survive under specific environmental conditions. The Disturbance Theory addresses the balance of environmental factors – disturbance, stress and competition – that need to be managed to allow the finer grasses to thrive and predominate.

The Disturbance Theory refers to 'environmental pressures' that can be impacted by course maintenance programmes – what are these?

The Disturbance Theory refers to three main pressures that govern the environment under which specific plant species have evolved and adapted to survive:

- **Disturbance:** External pressures placed on grass species inhabiting unsettled environments e.g. mowing, scarification, verti-cutting, wear damage from golfer traffic, pests, diseases, pitch marks etc.
- **Stress:** Environmental constraints to growth and regeneration e.g. shade, water, nutrient
- **Competition:** The ability of grass species to capture required resources – light, water, nutrient and space and suppressing the availability of these to their competitive neighbours

The Disturbance Theory suggests that greenkeepers need to create the right balance between these environmental pressures to promote the finer grasses, incorporating intermittent levels of stress at the appropriate time to discourage the ingress of annual meadow grass.

What impact do course management practices have on disturbing the environment recommended to promote the finer grasses?

The Disturbance Theory outlines the potential impact that various course management practices have on the level of environmental pressure that these activities create:

Mowing:	potential high disturbance (depending on frequency and height of cut)
Verti-cutting:	potential high disturbance (severity, timing, depth)
Wear:	potential high disturbance (e.g. walk off areas)
Pest activity:	potential high disturbance (e.g. leatherjackets)
Disease activity:	potential high disturbance (e.g. fusarium)
Aeration:	low to moderate disturbance
Top dressing:	low disturbance

Water availability:	low to moderate disturbance
Top dressing:	low disturbance
Water availability:	potential stress and disturbance
Nutrition:	potential high stress
Acidification:	potential moderate stress
Salinity:	potential high stress

The Disturbance Theory promotes a settled environment suggesting considerate preparation of the playing surfaces e.g. top dressing and rolling rather than mowing excessively low and incessant verti-cutting, minimising aggressive management, wherever possible.

The Disturbance Theory promotes the finer grasses, specifically bents and fescues.

How do we make the transition from a relatively high content of annual meadow grass to increase the proportions of the finer grasses recommended?

The Disturbance Theory recommends a number of course management practices that you may wish to consider, in relation to your current site specific characteristics:

- Manage the soil conditions: Reduce thatch and alleviate compaction through timely aeration and promotion of good drainage. This is considered to be the starting point.
- Minimise disturbance pressure on the turf: Concentrate on operations that minimise pressure and stress on the turf – top dress and roll rather than mow excessively low or intensively verti-cut
- Over seed regularly: This will encourage increased proportions of the finer grasses on the putting surfaces and combat the ingress of annual meadow grass.
- Control stress: Stress can be managed e.g. through fertiliser input, irrigation to set the environmental constraints for growth and regeneration of specific grass species. Manage your course maintenance program to ensure that you only exert stress e.g. through drought or starvation of the turf for short periods when the finer grasses have established themselves and you can afford to lose the annual meadow grass content from the turf.
- Minimise the gaps in the turf: annual meadow grass invades via gaps in the turf. Keep gaps to a minimum through moving pin positions regularly, timing aeration outside the annual meadow grass seeding seasons and encouraging golfers to repair their pitch marks.

The Disturbance Theory also suggests that courses with a high annual meadow grass content and evidence of thatch need to consider disturbing the environment in the first instance to alleviate these conditions which are very unsatisfactory for the promotion of the finer grass species. Pipe drainage, soil compaction relief, intensive coring, scarification, top dressing and a re-assessment of your nitrogen and water inputs may all therefore be required initially to create the right soil conditions and environment to promoting the finer grasses.

Once we have created the right soil and environmental conditions how do we promote and actively encourage the finer grasses?

You start by preparing your surfaces in a manner that does not require intensive verti-cutting and close mowing by reducing your fertiliser and water inputs so that you do not have to adopt aggressive practices. Top dress, brush and roll/turf-iron to maintain smoother and truer putting

surfaces of acceptable speed. Over seed at every available opportunity and let the seedlings come through. As the finer grasses start to establish, continue to keep any intensive treatments to a minimum.

In approximately 3 to 4 years when the finer grasses have assumed dominance within your sward, you can start to consider putting some stress on the annual meadow grass, but only when your existing sward can withstand losing the annual meadow grass.

How do we ensure that the annual meadow grass does not ingress once again and take over?

First of all, beware of the gap! Annual meadow grass sets seed to survive, many and widespread. By maintaining a dense sward you can close down the gaps and minimise the opportunities for annual meadow grass to ingress. Regularly over seed to fill any gaps with the finer grass species. Once again minimise any intensive course maintenance practices and adopt top dressing, brushing, rolling/turf-ironing to maintain quality playing surfaces as these practices minimise any damage to the sward.

Beware not to introduce any gaps in the sward by untimely coring or scarification practices that allows the annual meadow grass to take advantage (e.g. when annual meadow grass is seeding).

What benefits can adoption of the Disturbance Theory bring to golf courses?

If the finer bent and fescue grass species can be encouraged to flourish better year round playing surfaces will result. The turf will have greater resilience to drought conditions and provide good quality sustainable playing surfaces for the enjoyment of your members and visitors alike.

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