

GTC/The R&A Workshops Sustainability and the Golf Course

23rd June 2009



R&A

Governing Authorities



“Golf uses too much land for too few people and is socially and economically elite”



“The golf course is an over-manicured environment that uses too much water and chemicals”



“The golf course is imposed on the natural landscape and is a ‘green’ desert”



The R&A definition

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

Playing quality

- Measurable performance characteristics
- Greens: firmness, trueness and speed
- Fairways: firmness, bounce and run
- Perception. Colour? Healthy!
- How good does it have to be?







Player perception

Golf Digest course rankings now ask their assessors to judge conditioning by “How firm, fast and rolling were the fairways and how firm, yet receptive, were the greens on the day you played the course?”

Turf performance

The TruFirm measures firmness



Turf performance

The Trueness Meter
measures trueness of
ball roll



Environmental stewardship

- Care for the natural environment
- Landscape and soil preservation
- Water and air quality
- Habitat management and biodiversity
- Impact of inputs























Economic performance

- Cost of products used on the course
- Cost of machinery purchase and upkeep
- Cost of labour
- Income generation





Social responsibility

- What does the golf course contribute to society?
- A source of pollution and waste?
- A draw on precious resources?
- A “green desert”?

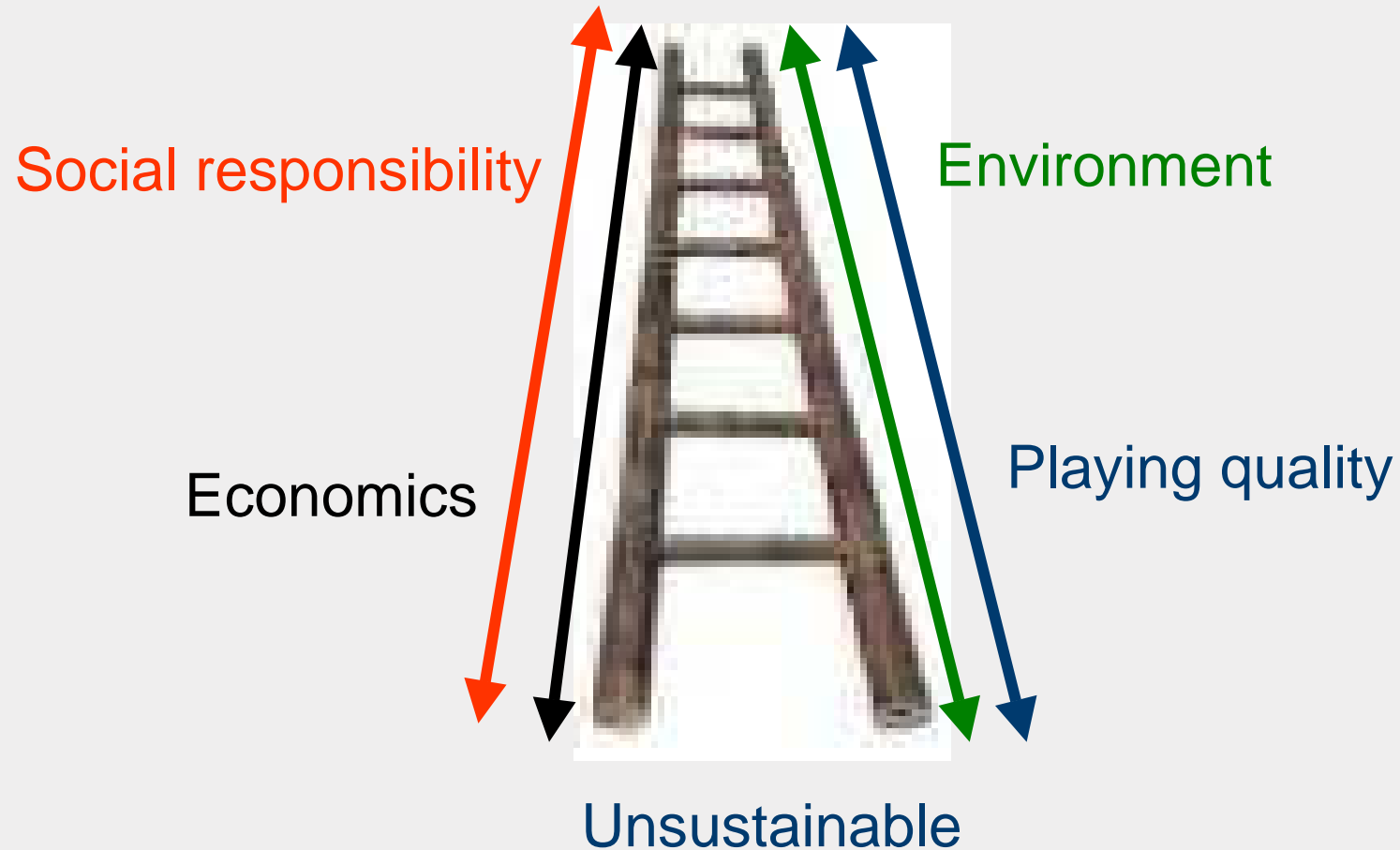




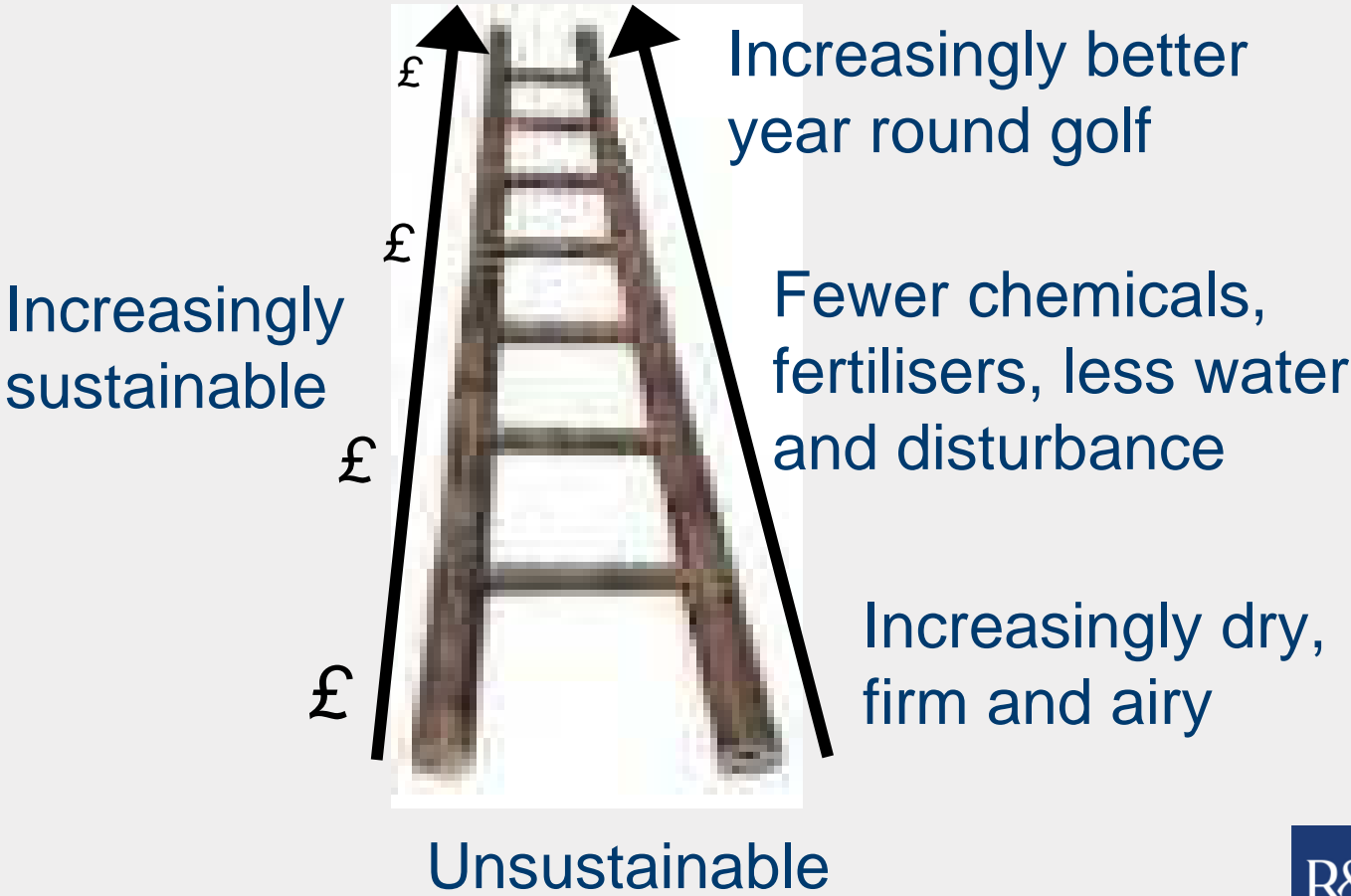




The sustainability ladder



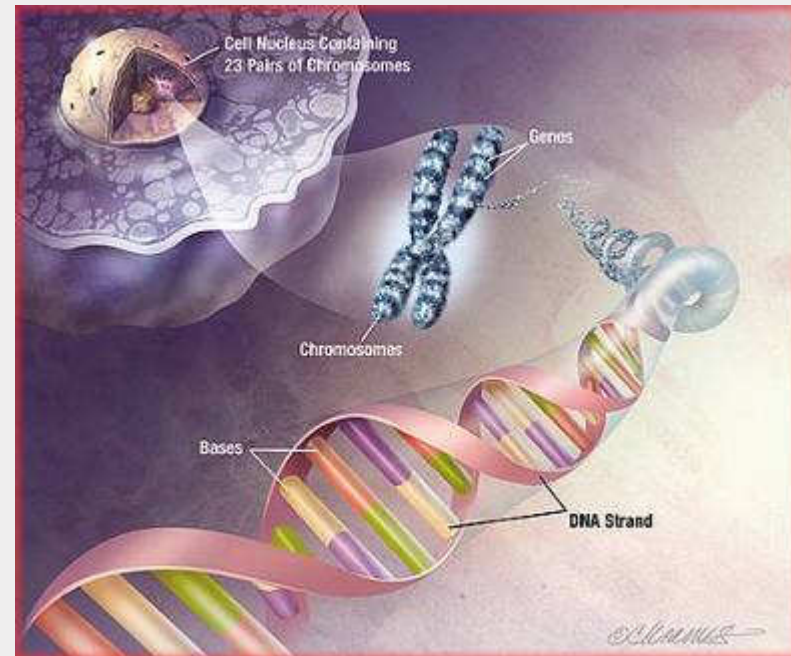
The ladder of sustainability



Sward composition as an indicator

DNA of grass

- Measures composition of swards
- Current techniques inaccurate (visual) or too time consuming (point quadrat)







The ladder of cool season grasses

Fewer inputs and less intensive maintenance

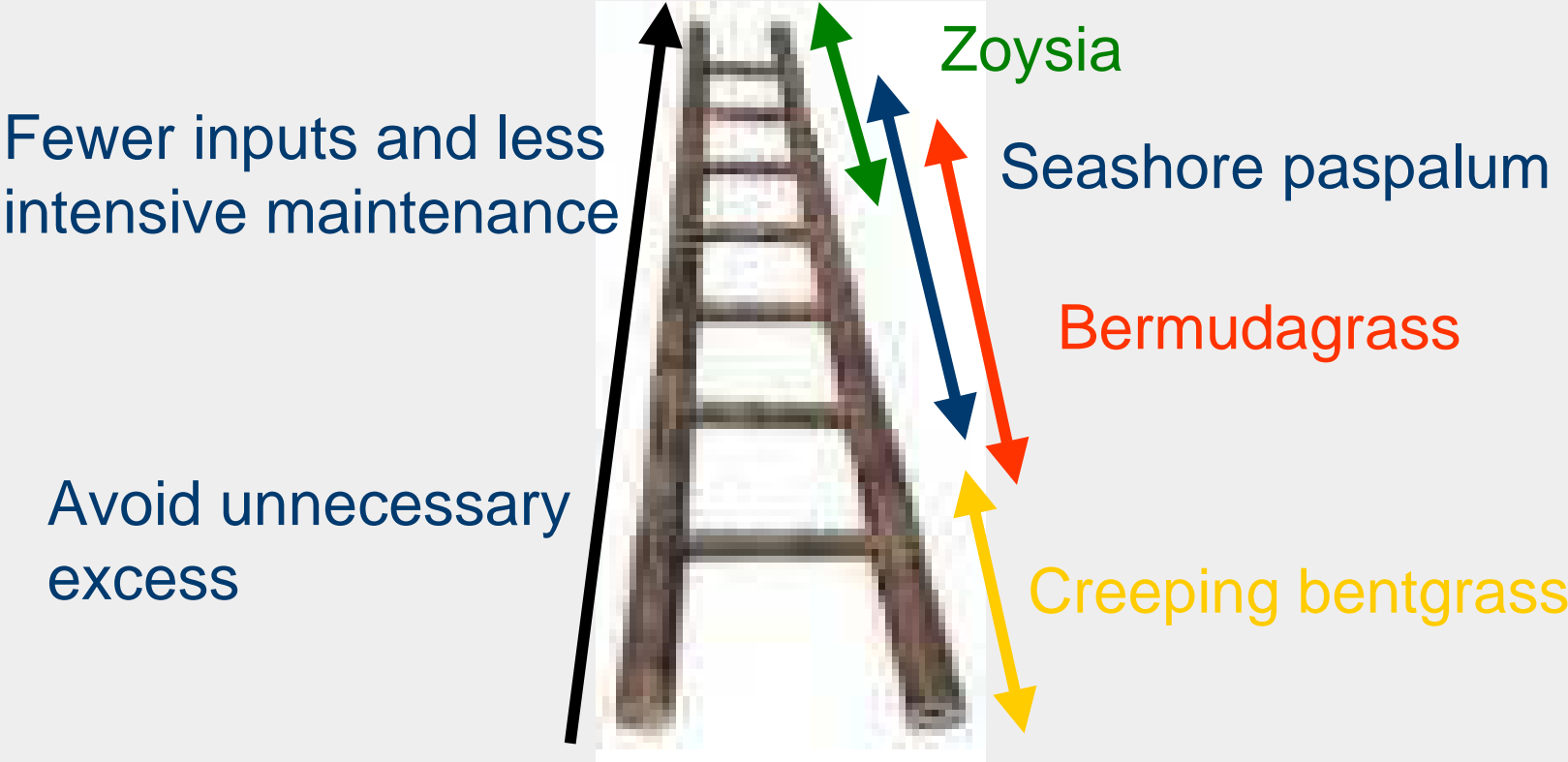
Avoid unnecessary excess



Unsustainable



The ladder of warm season grasses









Sustainability

Sustainability is about your ability to adapt.

Will a changing world remove the bottom rung(s) of the ladder?





Add data

Base survey: SGU survey
The forms to this survey enable you to input information about your facility in relation to key issues for your country, often relating to regulatory requirements, as identified by Scottish Golf Union.

Additional survey
There are no additional forms for SGU survey.

- You can also participate in
- PLAYING QUALITY [▶ Add](#)
Playing quality includes: Greens: playing quality
 - TEST GROUP [▶ Add](#)
Greens playing quality includes: Greens: playing quality
 - JUST FOR JEZ [▶ Add](#)
Greens playing quality includes: Greens: playing quality
 - JEZ'S TEST GROUP [▶ Add](#)
 - JEZ'S TEST GROUP [▶ Add](#)

Useful information

If you want to input historical data about your course, you must enter this earlier data first into the Annual forms. The system allows you to do this as far back as 2005. The Monthly forms are not date-bound in this way.

The system has built-in error trapping. If a number is entered incorrectly (e.g. 'six' instead of '6') then a warning pop-up box will appear and you should re-enter the data in the correct way.

Similarly, a warning will appear if a number is entered that is out of the expected range (e.g. a greens mowing height entered as 50 mm rather than 5 mm).

Do not use a comma to separate units of 1000, insert numbers only, i.e. 5000. For decimals use a full stop, i.e. 35.9. Some inputs allow for one decimal place, others two or more. If you input data with more than the allowed number of decimal places, a warning pop-up box will appear and you will need to re-enter the data.

Entering zero requires you to type '0', as the system doesn't treat a blank field as zero.

- #### Annual data
- SGU SURVEY
- About your facility
 - About your greens
 - About your fairways
 - About your rough grassland
 - About other areas of the course
 - Input costs
 - Water, energy and waste
- #### Monthly data
- SGU SURVEY
- Weather observations
 - Greens: input and activity
 - Green surrounds: input activity
 - Green surrounds: input and activity
 - Fairways: input and activity
 - Semirough input and activity
 - Tees: input and activity
 - Rough grassland: monthly input and activity

The service

- Available free to registered courses at **www.bestcourseforgolf.org**
- Anonymous
- Compare – true benchmarking

The service


- Record

Course management: Benchmarking - Windows Internet Explorer

http://hangnail.benchmarkers.com/benchmarking/enter_benchmark_data/x/frm=sgu_greens_inpu

Course management: Benchmarking

Mr Scottish Tester, Scottish test, Scotland | [Log out](#) [return to best practice guidelines](#)

R&A Benchmarking  **SCOTTISH GOLF**
THE OFFICIAL HOME OF GOLF IN SCOTLAND

[Benchmarking home](#) [Add data](#) [Graphs & data](#) [Printed report](#) [FAQs](#)

March 2009 [Review](#)

Fun course: Greens: monthly input and activity

The information you enter in this section should be the **total** for all the greens on this course during the month.

Irrigation use
Water used in the month for all greens: m³

Fertiliser use
Please give the amount of element applied. You can calculate this by using one of the formulas:
Solid formulation
Total element per application (kg) = application rate (kg/ha) × percent element in product/100
Liquid formulation (element content expressed in terms of weight to volume)
Total element per application (kg) = Volume applied (litres/ha) × percent element in product/100

Nitrogen: kg
Phosphorus: kg
Potassium: kg

Disease, weeds and pests

Disease

Type of disease:

Number of greens affected:

Weeds

Type of weed:

Number of greens affected:

Pests

Type of pest:

Number of greens affected:

Annual data
SGU SURVEY

-
-
-
-
-
-
-

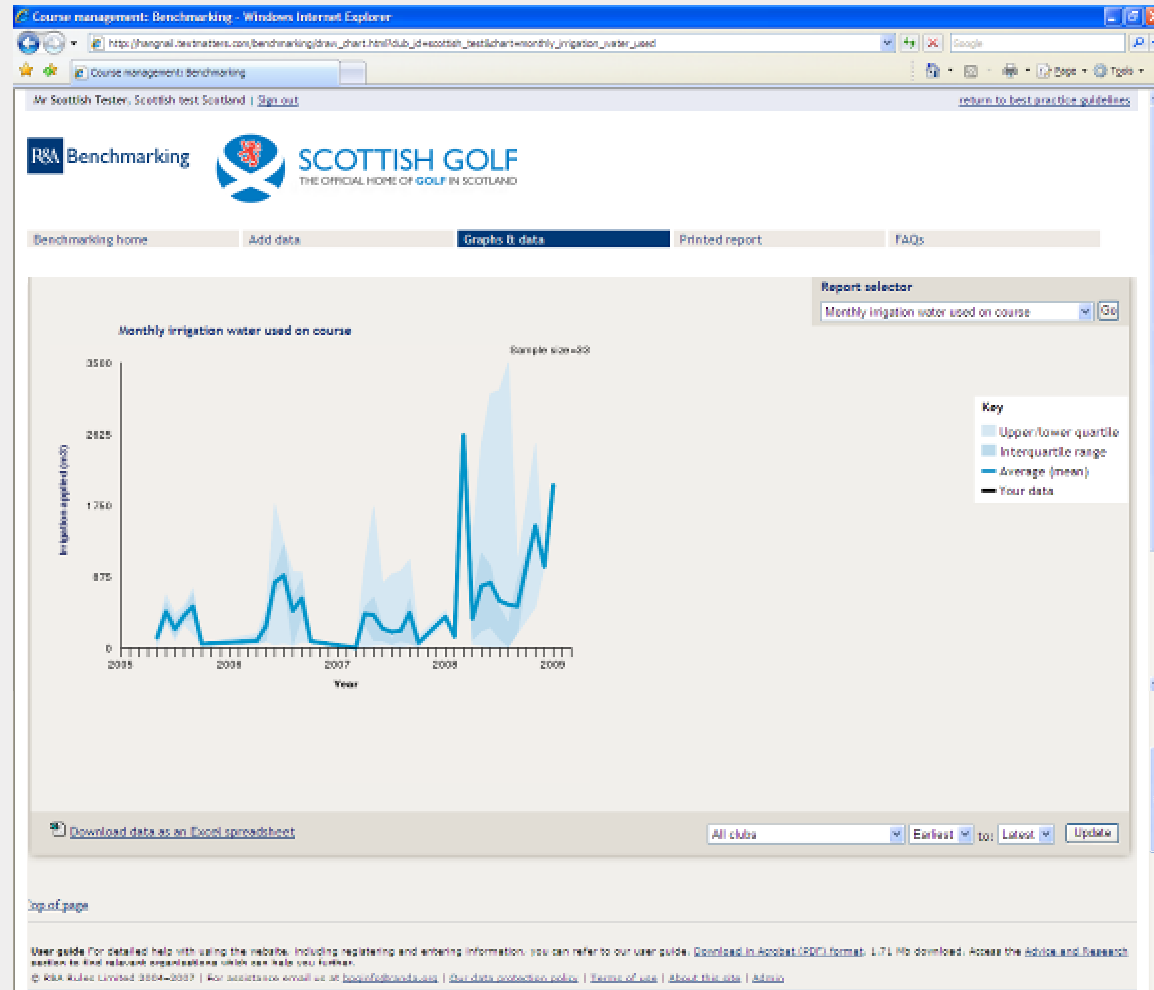
Monthly data
SGU SURVEY

-
-
-
-
-
-



The service

- Record
- Monitor



The service

- Record
- Monitor
- Report

Course management: Benchmarking - Windows Internet Explorer

http://hangmail.co.uk/benchmarking/report.html

Course management: Benchmarking

Mr Scottish Tester, Scottish test, Scotland | [Sign out](#) [return to best practice guidelines](#)

R&A Benchmarking **SCOTTISH GOLF**
THE OFFICIAL HOME OF GOLF IN SCOTLAND

[Benchmarking home](#) [Add data](#) [Graphs & data](#) [Printed report](#) [FAQs](#)

Build a report

Compare my club data against
All clubs for the year 2009

Summary
This text will be included at the beginning of the report

Charts To include
Tick the data set to add it to the report

Facility: Rounds played Greens: Irrigation against main grass type
 Greens: Moving height against main grass type Monthly irrigation water used on course
 Monthly rainfall Greens: Monthly mowing frequency
 Facility: Annual fertiliser costs Greens: Monthly nitrogen

Data To include
Tick the data set to add it to the report

Annual **Monthly**

Yrns Top dressing
 Annual materials costs Fertiliser use
 Hole number Tire disposal
 Water quality Irrigation use
 Climatic zone Divotting
 Water source Pesticide use
 Water use Mowing
 About the course at your facility Disease, weeds and pests
 Type of facility Course closure
 External advice Growth regulator
 Energy use Supplementaria
 Soil type Weeding agent
 Size and use of your course Balling
 Land ownership, the land is owned by Overseeding
 Soil chemistry Aeration
 Soil to grass types Scarification
 Holes Water courses
 Annual machinery costs
 Annual labour costs



Benefits

Improve understanding of maintenance on:

- Economics (revenue and expenditure)
- Environment (footprint and compliance)
- Golfers (playing quality and disruption)

Benefits

Benchmarking will provide the evidence that golf's national and international governing bodies need to enhance the reputation of the game amongst the environmental movement and regulators.

Based in St Andrews, The R&A is golf's governing body and the organiser of The Open Championship. The R&A is committed to working for golf and operates with the consent of 136 organisations, from the amateur and professional game, and on behalf of over 30 million golfers in 123 countries.



The R&A, St Andrews, Fife, Scotland KY16 9JD
telephone: +44 (0)1334 460 000 fax: +44 (0)1334 460 001
www.randa.org www.opengolf.com