

SQA Advanced Unit specification

General information for centres

Unit title: Management of Turf Areas on Golf Courses (SCQF level 7)

Unit code: HW90 47

Superclass: SF

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Unit purpose

It is the purpose of this Unit to identify and discuss concepts of turf quality, factors that contribute to the production of good quality turf, and the management practices available to achieve quality objectives.

Outcomes

On successful completion of the Unit the learner will be able to:

- 1 Describe the function of turf in relation to the game of golf with reference to quality parameters.
- 2 Explain the factors that establish the limitations to turf quality.
- 3 Describe the management practices available for turf on golf courses, formulating a programme appropriate to the quality objectives of the golf course.

Credit points and level

1 SQA Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7)

Recommended entry to the Unit

Prior to undertaking this Unit it would be advantageous to the learner to have completed a National Certificate in Greenkeeping (or equivalent) and/or to have experience in turf management ideally in a golf greenkeeping situation.

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Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this Unit specification.

There is no automatic certification of Core Skills or Core Skills components in this Unit.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

This Unit is likely to be delivered as part of the SQA Advanced Certificate in Golf Management and will be delivered and assessed within the subject area of Golf Management.

The objective of this Unit is to develop management thinking about turf maintenance on golf courses. Learners will ideally have appropriate experience and/or National Certificate in Greenkeeping and have knowledge of golf course maintenance practices. The Unit should be set in the context of the needs of the course owner/operator and other stakeholders where appropriate, and the concept of 'affordable quality' within the constraints set both by the physical environment (climate, soils) and by the economic, political and social environments. These can all be discussed within a course policy document in which management objectives and anticipated/planned maintenance practices to achieve them are set out.

Equality and inclusion

This Unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

SQA Advanced Unit specification: Statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Learners should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Describe the function of turf in relation to the game of golf with reference to quality parameters.

Knowledge and/or Skills

- ◆ Turf requirements:
 - Present the ball for striking
 - Receive the ball from a well struck shot
 - Roll of the ball
 - Traction for the player
 - Aesthetic presentation
- ◆ Turf parameters:
 - Texture
 - Density
 - Resilience
 - Smoothness
 - Trueness
 - Speed
 - Sward composition
 - Rooting
 - Colour
 - Presentation

Outcome 2

Explain the factors that establish the limitations to turf quality.

Knowledge and/or Skills

- ◆ Limiting factors of turf quality:
 - Physical
 - Economic
 - Social
 - Environmental

Outcome 3

Describe the management practices available for turf on golf courses, formulating a programme appropriate to the quality objectives of the golf course.

Knowledge and/or Skills

- ◆ Course Policy Documents
- ◆ Objective setting
- ◆ Management tools
- ◆ Maintenance practices:
 - Mowing
 - Defoliation
 - Aeration
 - Drainage
 - Nutrition
 - Irrigation

Evidence Requirements for this Unit

Learners will need to provide evidence to demonstrate their Knowledge and/or Skills across all Outcomes by showing that they can:

- ◆ identify, discuss and present information relating to turf quality, limitations on its production and management tools/maintenance practices available to ensure quality.
- ◆ assess the quality of an area or areas of turf, eg the tee, fairway and green of one complete golf hole, and to make measurements and/or judgements about these areas based on discussion of turf quality.
- ◆ explain the reasons for the levels of quality observed/measured.
- ◆ recommend a maintenance programme appropriate to maintain or improve quality.

SQA Advanced Unit Support Notes

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Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

As golf continues to grow globally it faces many challenges, not least of which is the way in which it manages its golf courses. Included among the challenges facing golf providers in relation to their golf courses are the pressures for quality surfaces, aesthetically pleasing landscapes, the perception of golf as an indulgent and environmentally insensitive land use, and the costs associated with golf course maintenance. It is the purpose of this Unit to encourage the learners to approach the management of turf areas on golf courses mindful of, and taking into account, these challenges. Initially the learners will be asked to consider turf quality in terms of 'fitness for purpose', and to explore the different purposes for which turf is managed ranging from low budget recreational golf to maintenance of courses used for professional and globally significant championships. Limitations on the production of turf of the highest quality will be identified and discussed using the concepts of sustainable golf course management detailed within the R&A Golf Course Management internet based materials, which take into consideration social, economic and environmental parameters that have an impact on what can be achieved. Throughout this the concept of 'affordable quality' will be maintained as a reference; for each and every golf course this will be different. These concepts underpin the content for Outcomes 1 and 2. Specific vocational Knowledge and Skills will be in the areas of developing soil and grass knowledge into practical situations (learners will have an introductory knowledge of this if they have completed the National Certificate in Greenkeeping) and learners will also be introduced to the other considerations outlined above. This is part of the development of management competence and understanding that turf maintenance does not take place in isolation of other non-physical factors.

For Outcome 3 learners will be asked to identify limitations on production of turf quality for a specific location, which could be a golf course that they work or have worked on, one that they have visited as part of the Unit, or a case study provided by the tutor. Learners will be asked to prepare a Course Policy Document covering a period of five years, which will set quality objectives and develop maintenance plans to allow these to be met. This will describe and take into consideration the social and economic constraints of the club as well as the more familiar agronomic factors.

Considerable support for this Unit can be gained through the R&A website which contextualises golf course management within the parameters of social, environmental and economic considerations.

Guidance on approaches to delivery of this Unit

Teaching of this Unit will be achieved through a range of approaches. Given the specific nature of this Unit it is considered that it should be based on experiencing real-life turf management situations, ideally through visiting them directly. Field trips to a range of differing golf courses will provide material for discussion and identification of limitations to the production of quality turf, and should include low, medium and high budget courses providing

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to different segments of the golf market, as well as golf courses on a range of landscape types. Classroom activities should include thinking exercises encouraging the learners to, for example, identify and justify priorities in their objectives, consider similarities/differences between different golf courses and turf quality situations. The internet is a potentially useful resource of teaching materials, including case studies, videos, templates and bench-marking tools allowing learners to see and think about different turf management situations. Learners should be encouraged to be self-reliant in their use of all resources and to gather further experiences as much as they can in their own time, which might be as simple as golfing on a course not previously experienced, although full tutor support should be available.

The Outcomes are intended to provide a 'flow' through the Unit, and therefore delivered more or less in sequence. As such it is anticipated that a series of visits is organised for the first part of the Unit, with observations/findings discussed on site and subsequently more formally in the classroom. Learners could be asked to work together within groups to report on each golf course, providing a formative assessment opportunity, focus for discussions and extraction of main learning points. Outcomes 1 and 2 will be difficult to separate at this stage, but will need to be teased out to ascertain competence during summative assessment.

Outcome 3 is intended to encourage the learners to set objectives using the parameters they have identified in Outcomes 1 and 2, appropriate to a specific turf management situation, and to formulate a plan of maintenance to allow these objectives to be met. This can be achieved using a Course Policy Document template into which a range of maintenance tasks can be inserted at the appropriate times and frequencies. This approach is widely used in industry, so is a 'real life' competence intended to build confidence in the learners. For each golf course this is likely to be specific and different.

Considerable support for this Unit can be gained through the R&A website which contextualises golf course management within the parameters of social, environmental and economic considerations.

Guidance on approaches to assessment of this Unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

Assessment for Outcomes 1 and 2 could be made using a single instrument of assessment, in the form of a written or spoken report setting out their understanding of turf quality and the factors determining it, then comparing and contrasting the turf quality requirements of two differing golf courses. This could for example be a comparison of an internationally renowned links course with a more modest links course, or a parkland course with a links course of similar standing; what is important is that the learner can identify the differences between the two situations, and describe the reasons for those differences, so any suitable contrast is acceptable.

Assessment for Outcome 3 could be made by producing a Course Policy Document from a template. This will include a statement of turf quality parameters suitable to a particular situation, and a maintenance plan on how that can be achieved. This will include but is not limited to details of heights and frequency of mowing, fertiliser use, aeration type and frequency, topdressing, use of water, and any pest control requirements. This will be included for all managed turf areas of the golf course (greens, tees, fairways, mown rough).

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Depending on past experience this could be the first time that learners will have formulated a maintenance plan, so a template will provide support for that.

All assessment will be open-book and based upon learning that has taken place through the Unit, as well as any pre-knowledge.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

The choice of delivery methods for the Unit is particularly important as the Unit lends itself to learning and teaching approaches which make it possible for learners to document and present suitable assessment evidence as they work through the Unit.

Learners, for example, will be encouraged to create an e-portfolio, or write a blog or maintain a learning journal. They could, as an integral part of the learning and teaching process, be given guidance on how to structure and organise their material so that it is in a form that can easily be presented for assessment purposes.

Learners work will be authenticated through guidance provided above.

Hence, in devising suitable delivery methods, it may be helpful to bear in mind that evidence for assessment can be generated in many different ways, including:

Use of e-portfolios: embed or link media rich work such as audio, video, image; encourage peer review and feedback conversations; open online platform debate and discussion; learning journals; project documentation; research diaries and reading logs; reflection.

Use of blogs: embed or link media rich work such as audio, video, photographs, project documentation, learning journals, research diaries, online presentation.

Use of VLEs as collaborative assignment hubs: eg documentation of project research; events; work experience; forums.

Use of social media as interactive assignment hubs: eg documentation of project, research diary; events; work experience; forums.

Methods such as those above link learning and teaching methods directly with the generation of formative and summative assessment evidence so that they become part and parcel of the same thing. The categories are not mutually exclusive, eg social media can be used as a hub for peer review.

Opportunities for developing Core and other essential skills

Opportunities exist within this Unit for development of Core Skills, including *Working with Others* and *Communication* both spoken and written. The Unit competences are vocational in nature and therefore provide employability skills, in terms of teamwork, observation, reasoned argument and planning. The Unit is focussed around the concept of sustainable golf course management, so an understanding of sustainability agendas will also be gained.

Depending on the learning and teaching approaches adopted, the Unit provides opportunities for developing three components of the Core Skill of *Communication*, two components of *Problem Solving*, and two components of *Working with Others*.

Communication: Oral Communication at SCQF level 6

Learners will work, both individually or as part of a team developing a broad range of skills while communicating with other members of the team. They will need to convey information and contribute to classroom debates and discussions all of which will require them to use vocabulary, appropriate to the golf industry.

Communication: Written Communication (Reading) at SCQF level 6

In order to complete the Unit, learners will have to become familiar with the technical terms used in the golf industry.

Communication: Written Communication (Writing) at SCQF level 6

In order to complete the Unit, learners will have to generate evidence to demonstrate that they have achieved both Outcomes. This could take the form of written communication. In this, they will be expected to present their work in a suitable manner using a recognised format. There are alternative ways to present written evidence such as by personal reports or by contributions to an online forum. Whatever approach is adopted, learners will be required to organise a substantial body of material and make use of complex language and specialist vocabulary.

Communication: Oral Communication at SCQF level 6

Learners will be required to provide evidence of various aspects of golf courses under investigation. The research may be complex and learners may also respond to questions or queries from others. Learners may also contribute to debates and discussions all of which will require them to use vocabulary appropriate to the audience involved.

Problem Solving: Critical Thinking at SCQF level 6

In order to complete the Unit, learners will be expected to put some of the theories into practice while expanding both skill set and knowledge. The learner will have to compare and consider the choices available at different golf clubs/facilities.

Problem Solving: Planning and Organising at SCQF level 6

In order to complete the Unit, learners will have to plan their activities and research. Learners will have to identify the type and availability of resources required by the project which will require them to engage in research activity.

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Information and Communication Technology (ICT): Accessing Information at SCQF level 6.

In order to complete the Unit, learners will be required to carry out research relevant to their chosen strategy. This is likely to involve the use of a range of ICT equipment and learners may need to carry out complex searches for information relevant to the chosen strategy. Learners are also likely to need to ensure that the data for their project is kept secure and well managed.

Information and Communication Technology (ICT): Providing/Creating Information at SCQF level 6

In the development of their idea from the initial concept through production of the final report, learners are likely to use *ICT* for a range of tasks including locating and integrating data from a range of sources.

Working with Others: Working Co-operatively with Others at SCQF level 6

The learner will, on occasion, be working as part of a team. During this phase the learner will to collaborate with others while considering individual preferences, working methods and shared goals within a task. Opportunities will arise for the learner to review and discuss their own performance with the aim of becoming more efficient and competent.

Other essential skills

Throughout the Unit learners will develop knowledge and skills which are specifically intended to enhance their employability in the golf sector. Because these and other soft skills such as punctuality, presentability and efficient time management are readily transferable, they could also be applied to many other sectors and/or areas of employment.

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History of changes to Unit

Version	Description of change	Date

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SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of SQA Advanced Qualifications.

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General information for learners

Unit title: Management of Turf Areas on Golf Courses (SCQF level 7)

This section will help you decide whether this is the Unit for you by explaining what the Unit is about, what you should know or be able to do before you start, what you will need to do during the Unit and opportunities for further learning and employment.

Before you start this Unit it will be useful although not essential that you have a National Certificate or Level 2 SVQ in Greenkeeping and that you have worked on a golf course for a minimum of 12 months, ie that you have experienced a full annual cycle. You should also be able to identify what, in your opinion, makes good quality turf, in other words what the golfers and other interested people are looking for you to produce. You should also be willing to come to the Unit with an open mind and be prepared to look at and discuss turf in a variety of situations.

The Unit will build on your existing knowledge and identify some 'parameters', or measurable characteristics, by which we can make judgements about whether turf is of good quality. We will look at turf in a range of golf courses and discuss whether the quality is as we expect, not just relating to the climate and soil (as we might have done before) but also thinking about the place of the particular club within the game, and how much money it has. Once we have done that you will be asked to decide what turf quality would mean for a particular club, and put together a maintenance plan so that they could achieve it. You will develop your skills of reasoned argument, observation, communication and planning, all in ways that will enhance your employability.

You will be assessed by a report and by putting together a plan, both open-book assessments.